United Nations S/AC.44/2013/17

Security Council

Distr.: General
21 October 2013

Original: English

**Security Council Committee established pursuant to resolution 1540 (2004)**

## Letter dated 11 October 2013 from the Permanent Representative of the United States of America to the United Nations addressed to the Chairman of the Committee

I have the honour to respond to your letter, dated 27 February 2013, on behalf of the Security Council Committee established pursuant to resolution 1540 (2004). The enclosed report to the Committee (see annex) is a comprehensive update of United States laws, policies, projects and initiatives to prevent illicit trafficking of weapons of mass destruction, their delivery systems and related materials to non-State actors, and in particular to prevent terrorists from acquiring such items.

The 2013 United States report is intended to supplement earlier reports and incorporates input from multiple United States Government departments and agencies. In this latest version, the United States reports for the first time that it has measures in place to implement all of its obligations under Security Council resolution 1540 (2004). The report also includes a wide range of data on implementation, enforcement and lessons learned, and reflects a "whole-of-government" approach as a best practice for enhancing national implementation of resolution 1540 (2004).

Allow me also to remind the Committee of the United States website which contains additional information on my Government's efforts to implement the resolution: www.state.gov/t/isn/c18943.htm. The United States would also like to take this opportunity to request that the enclosed report be posted on the Committee's website.

The United States looks forward to continued cooperation with the Committee.

(*Signed*) Samantha **Power**

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**Annex to the letter dated 11 October 2013 from the Permanent Representative of the United States of America to the United Nations addressed to the Chairman of the Committee**

**Additional information on measures taken to implement United Nations Security Council resolution 1540 (2004) by the United States of America, October 2013**

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## United States

### Executive summary

The threats posed by proliferation of nuclear, chemical and biological weapons to terrorists and other non-State actors continues to rank among the most dangerous threats facing the United States . The United States continues to strengthen its efforts to counter such threats in at least two ways. First, the United States implements its obligations under United Nations Security Council resolution 1540 (2004) and other non-proliferation instruments. Second, the United States works to assist others in their non-proliferation efforts. The report responds to a request by the Committee established pursuant to United Nations Security Council resolution 1540 (2004) to update information on measures the United States has taken to implement the resolution since 2010. Highlights of the report include:

- For the first time, the United States reports taking measures to implement all of its obligations under the resolution. The report also includes a wide range of data on implementation and enforcement of such measures
- Summary of the 1540 Committee visit to the United States in September 2011, the first such visit made by the Committee to any country
- Identification of the international and national standards, guidance and practices the United States applies to strengthen its implementation of the resolution
- Description of United States assistance to foster implementation of the resolution worldwide, including the $1.65 billion budget request for the 2014 fiscal year for cooperative threat reduction activities that mainly goes towards such assistance
- Information on the extensive government programmes to engage industry and the public, including their increasing use of new media and outreach to new audiences

An annex to the report contains an updated version of the Committee matrix for the United States, which includes all measures taken by the United States covered in this report and earlier submissions to the Committee (the matrix is available on the Committee's website: www.un.org/en/sc/1540/national-implementation/national-reports.shtml). For further information, please contact the United States UNSCR 1540 Coordinator, Dr. Richard T. Cupitt, at cupittRT@state.gov or +1 202 736 4275.

## List of abbreviations

| | |
|---|---|
| AG | Australia Group |
| APHIS | Animal and Plant Health Inspection Service |
| AR | Army Regulation |
| ASEAN | Association of Southeast Asian Nations |
| BIS | Bureau of Industry and Security, Department of Commerce |
| BSAT | biological select agents and toxins |
| BWC | Biological and Toxin Weapons Convention |
| CARICOM | Caribbean Community |
| CBEP | Cooperative Biological Engagement Program |
| CBP | United States Customs and Border Protection |
| CCL | Commerce Control List |
| CDC | Centers for Disease Control and Prevention |
| CFATS | Chemical Facility Anti-Terrorism Standards |
| CFR | Code of Federal Regulations |
| CMA | Chemical Materials Activity |
| COI | Chemicals of Interest |
| CSI | Container Security Initiative |
| C-TPAT | Customs-Trade Partnership Against Terrorism |
| CWC | Chemical Weapons Convention |
| DDTC | Directorate of Defense Trade Controls |
| DHS | Department of Homeland Security |
| DNDO | Domestic Nuclear Detection Office, DHS |
| DOC | Department of Commerce |
| DoD | Department of Defense |
| DOE | Department of Energy |
| DOJ | Department of Justice |
| DOS | Department of State |
| DOT | Department of Transportation |
| DTAG | Defense Trade Advisory Group |

| | |
|---|---|
| DTRA | Defense Threat Reduction Agency |
| DURC | dual-use research of concern |
| E2C2 | Export Coordination Enforcement Center |
| EAR | Export Administration Regulations |
| EMCP | Export Management and Compliance Program |
| EXBS | Export Control and Related Border Security |
| FATF | Financial Action Task Force |
| FBI | Federal Bureau of Investigation |
| FFIEC | Federal Financial Institutions Examination Council |
| FinCEN | Financial Crimes Enforcement Network |
| GICNT | Global Initiative to Combat Nuclear Terrorism |
| GTRI | Global Threat Reduction Initiative |
| HEU | highly enriched uranium |
| HHS | Department of Health and Human Services |
| HSI | Homeland Security Investigations |
| IAEA | International Atomic Energy Agency |
| ICE | United States Immigration and Customs Enforcement, DHS |
| IEEPA | International Emergency Economic Powers Act |
| ITAR | International Trafficking in Arms Regulations |
| LDs | License Determinations |
| LEU | low enriched uranium |
| MTCR | Missile Technology Control Regime |
| NIAID | National Institute of Ailergy and Infectious Diseases |
| NIH | National Institutes of Health |
| NMMSS | Nuclear Materials Management and Safeguards System |
| NNSA | National Nuclear Security Administration |
| NPT | Treaty on the Non-Proliferation of Nuclear Weapons |
| NRC | Nuclear Regulatory Commission |
| NSABB | National Science Advisory Board on Bioscience |
| NSG | Nuclear Suppliers Group |

| | |
|---|---|
| OAS | Organization of American States |
| OFAC | Office of Foreign Assets Control |
| OPCW | Organization for the Prohibition of Chemical Weapons |
| OPDAT | Office of Overseas Prosecutorial Development and Assistance |
| OSCE | Organization for Security and Cooperation Europe |
| PSI | Proliferation Security Initiative |
| SDN | Specially Designated Nationals |
| SFI | Secure Freight Initiative |
| SIA | Society for International Affairs |
| TAC | Technical Advisory Committee |
| TSA | Transportation Security Administration |
| USC | United States Code |
| USCG | United States Coast Guard |
| USDA | United States Department of Agriculture |
| USML | United States Munitions List |
| WHO | World Health Organization |
| WMD | weapons of mass destruction |

## Introduction

This report responds to a request by the Committee established pursuant to United Nations Security Council resolution 1540 (2004) to update information on measures the United States has taken to implement the resolution. The United States submitted an initial report to the Committee in October 2004, which it updated with additional information in September 2005 and December 2007. The United States provided the Committee with an extensive update of its assistance activities and approved an update of the 1540 Committee matrix for the United States in 2010. The United States also submitted a National Action Plan in 2007, a joint European Union-United States declaration regarding Security Council resolutions 1540 (2004) and 1977 (2011) in 2011, and updates on its point of contact information and legislative database in 2013. This report focuses on new or amended measures taken by the United States since December 2010. An annex to the report contains an updated Committee matrix that comprises all measures taken by the United States covered in this and earlier submissions (the matrix is available on the Committee's website: www.un.org/en/sc/1540/national-implementation/national-reports.shtml).

*First 1540 Committee country visit, September 2011*

In support of a recommendation in the 2009 comprehensive review, the United States invited the Committee on 22 December 2010 to conduct a visit to the United States to discuss its implementation of the resolution. This first-ever country-specific Committee visit took place from 12 to 16 September 2011. Many of the measures and effective national practices identified in preparation for the visit, during the visit, and in follow-up activities appear throughout this report.

The delegation met with officials of the Departments of Agriculture (USDA), Commerce (DOC), Defense (DoD), Health and Human Services (HHS), Homeland Security (DHS), Justice (DOJ), State and Treasury. The participating United States officials typically came from specialized offices and agencies of these Departments, including the Animal and Plant Health Inspection Service (APHIS) of the Department of Agriculture, the Bureau of Industry and Security (BIS) of the Department of Commerce, the HHS Centers for Disease Control and Prevention (CDC) and National Institutes of Health (NIH), the United States Customs and Border Protection (CBP), United States Immigration and Customs Enforcement-Homeland Security Investigations (ICE-HSI) and Domestic Nuclear Detection Office (DNDO) of the Department of Homeland Security and the DOJ Federal Bureau of Investigation (FBI).[1]

The delegation also met with the Nuclear Regulatory Commission (NRC), an independent regulatory body, and with officials from the Office of the WMD Coordinator in the Executive Office of the President. Beyond briefings at Department headquarters in Washington, D.C., the delegation had the opportunity to visit a nuclear research reactor at the University of Maryland, the USDA Molecular Diagnostic Lab, the Plant Germplasm Quarantine Facility and the Center for Plant Health Science and Technology (CPHST) Beltsville Laboratory at the USDA National Center for Applied Protection, which included a look at its high

[1] The delegation consisted of Mr. Florian Laudi (Germany), Ms. Ruvarna Naidoo (South Africa) and Mr. Oubina (Nigeria) of the Committee, along with Mr. Berhanykun Andemicael, Dr. Richard Cupitt and Mr. Petr Litavrin from the Expert Group.

containment facility (which could be used as a maximum containment facility if necessary). The delegation also visited the mock laboratory used for the national biosafety and biocontainment training programme for biosafety levels 3 and 4 at the NIH, and one of the two National Targeting Centers. The Committee delegation participated in several meetings with civil society and industry during the visit. Through a further invitation, the United States hosted another Committee delegation at the CDC in Atlanta, Georgia in February 2012.[2]

The United States found the delegation visits very useful in improving its own inter-agency understanding of the resolution and the work of the Committee, and encourages other United Nations Member States to issue an invitation to the Committee. The visit highlighted the importance of certain generally applicable effective practices and strategies that contribute to robust implementation of Security Council resolution 1540 (2004). In particular, the existence of a specific Point of Contact within the United States national Government for resolution 1540 issues helped to ease the country visit process, facilitated the thorough collection and sharing of information, helped develop and execute national implementation strategies and ensured the full reporting on implementation to national authorities and the 1540 Committee.

Having a national Point of Contact also contributes to managing and coordinating a "whole of government" approach to implementation of resolution 1540 (2004), an approach that can maximize cooperation across the Government, avoid duplication of programmes and activities and help promote increasingly efficient use of resources. The United States has notified the Committee of two United States Points of Contact, the UNSCR 1540 Coordinator, located in Washington, D.C., in the State Department Office of Counterproliferation Initiatives and a representative at the United States Mission to the United Nations.

The United States country visit also illustrated the importance of including a wide range of stakeholders into national implementation efforts. For the United States , the sharing of information with state and local governments, along with nongovernmental entities in academia, industry and the media — and finding a contributory role for these entities — serves as an important force multiplier in its efforts to implement the resolution.

## Operative paragraph 1 — prohibited State activities

**Decides that all States shall refrain from providing any form of support to non-State actors that attempt to develop, acquire, manufacture, possess, transport, transfer or use nuclear, chemical or biological weapons and their means of delivery**

The 2010 United States *National Security Strategy* continues to guide the overall United States policy for implementing Security Council resolution 1540 (2004).[3] The *Strategy* states that "a terrorist attack with a nuclear weapon" constitutes the most dangerous and urgent threat facing the United States. To prevent such a catastrophe, the *Strategy* makes a world without nuclear weapons a long-term goal of the United States, and specifically commits the United States to

[2] The United States also offered a follow-on site visit to the Y-12 Plant in Oak Ridge, Tennessee.

[3] See http://www.whitehouse.gov/sites/default/files/rss_viewer/national_security_strategy.pdf.

strengthening the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), supporting the safe and secure peaceful uses of nuclear energy and securing vulnerable nuclear weapons and materials worldwide. The *Strategy* also emphasizes the general need to deny terrorists weapons of mass destruction (WMD), including by taking "actions to safeguard knowledge and capabilities in the life and chemical sciences that could be vulnerable to misuse". Notably, it also emphasizes a "whole-of-government" approach for strengthening national capacity.

In the 2011 *National Strategy for Counterterrorism*, the United States makes clear that preventing terrorists from developing, acquiring and using WMD is among the highest priority of the United States counter-terrorism strategy.[4] The strategy states, "the United States will work with partners around the world to deter WMD theft, smuggling, and terrorist use; target and disrupt terrorist networks that engage in WMD-related activities; secure nuclear, biological, and chemical materials; prevent illicit trafficking of WMD-related materiel; provide multilateral non-proliferation organizations with the resources, capabilities, and authorities they need to be effective; and deepen international cooperation and strengthen institutions and partnerships" that prevent WMD and nuclear materials from falling into the hands of terrorists. Similarly, the 2011 *National Strategy to Combat Transnational Organized Crime* states that "While the crime-terror nexus is still mostly opportunistic, this nexus is critical nonetheless, especially if it were to involve the successful criminal transfer of WMD material to terrorists ...".[5] Several earlier United States Government national strategy documents also contain the objective of combating the proliferation of WMD, particularly to terrorists, as a core strategic element.[6]

The United States has begun building national strategies in at least two new fields relevant to resolution 1540 (2004) implementation. In July 2012 President Obama announced the first United States *National Strategy for Biosurveillance*, which states that "we must be prepared for the full range of threats, including a terrorist attack involving a biological agent, the spread of infectious diseases, and food-borne illnesses. The effective dissemination of a lethal biological agent, for instance, could endanger the lives of hundreds of thousands of people and result in untold economic, societal, and political consequences".[7] In 2011, the United States also began a review of National Space Transportation Policy, which builds upon the principles and goals established in the June 2010 *National Space Policy of the United States of America*.[8]

Building on its extensive commitments to international non-proliferation instruments, the United States also, at the 28 May 2013 high-level political meeting of the Proliferation Security Initiative (PSI) tenth anniversary, pledged to finalize accession to two international treaties that criminalize WMD trafficking using commercial ships and aircraft — the 2005 Protocol to the Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation (signed by the United States on 17 February 2006) and the 2010 Convention on the Suppression

[4] See http://www.whitehouse.gov/sites/default/files/counterterrorism_strategy.pdf.

[5] See http://www.whitehouse.gov/administration/eop/nsc/transnational-crime.

[6] For a list of other United States national security-related strategies, see http://www.acq.osd.mil/cp/ns.html.

[7] See http://www.whitehouse.gov/sites/default/files/National_Strategy_for_Biosurveillance_July_2012.pdf.

[8] See http://www.whitehouse.gov/sites/default/files/national_space_policy_6-28-10.pdf and http://www.faa.gov/about/office_org/headquarters_offices/ast/advisory_committee/meeting_news/media/COMSTAC_Minutes_May_2011.pdf.

of Unlawful Acts Relating to International Civil Aviation (signed by the United States on 10 September 2010), respectively.[9]

In addition to its work within the existing framework of non-proliferation instruments related to the resolution, President Obama initiated the Nuclear Security Summit process in 2010, putting nuclear security on the policy agenda at the highest level of government in key countries around the world. Leaders of the 47 countries attending the 2010 summit renewed their commitment to ensure that nuclear materials under their control are not stolen or diverted for use by terrorists, and pledged to continue to evaluate the threat and improve the security as changing conditions may require, and to exchange best practices and practical solutions for doing so. Implementing Security Council resolution 1540 (2004) constitutes an important part of the Summit process workplan.[10]

## Operative paragraph 2 — prohibited non-State activities

**Decides also that all States, in accordance with their national procedures, shall adopt and enforce appropriate effective laws which prohibit any non-State actor to manufacture, acquire, possess, develop, transport, transfer or use nuclear, chemical or biological weapons and their means of delivery, in particular for terrorist purposes, as well as attempts to engage in any of the foregoing activities, participate in them as an accomplice, assist or finance them**

As described in its previous submissions — and as acknowledged by the Committee in the United States matrix — the United States has a variety of laws to prohibit non-State actors from the proliferation activities specified in paragraph 2 of the resolution. In an amendment to earlier versions of its matrix, the United States notes an additional measure in force in 2006 prohibiting the transport of chemical and biological weapons and another measure from 1995 on the prohibition of the transport of chemical weapons:

- The Public Health Security and Bioterrorism Preparedness Response Act of 2002 (which incorporates the Agricultural Bioterrorism Protection Act of 2002 as Title II, Subtitle B), which amended the United States Code (USC) to prohibit "restricted" persons from transporting biological agents and toxins[11] and General Prohibition Seven of the Export Administration Regulations, which prohibits unlicensed United States persons from providing transportation in support of proliferation activities. Title 18 USC section 2283, states that:

  Transportation of explosive, biological, chemical, or radioactive or nuclear materials: (a) In General. — Whoever knowingly transports aboard any vessel within the United States and on waters subject to the jurisdiction of the United States or any vessel outside the United States and on the high seas or having United States nationality an explosive or incendiary device, biological agent, chemical weapon, or radioactive or nuclear material, knowing that any such item is intended to be used to commit an offense listed under section

[9] See http://www.state.gov/r/pa/prs/ps/2013/05/210010.htm.

[10] See the Nuclear Security Summit Work Plan at http://www.whitehouse.gov/the-press-office/work-plan-washington-nuclear-security-summit.

[11] See 18 USC 175(b).

2332b(g)(5)(B), shall be fined under this title or imprisoned for any term of years or for life, or both. (b) Causing Death. — Any person who causes the death of a person by engaging in conduct prohibited by subsection (a) may be punished by death.[12]

- Section 143 of the National Defense Authorization Act for Fiscal Year 1995 (Public Law 103-337) establishes a prohibition regarding the transportation of the chemical weapons across United States State lines, which continues in force:

  Transportation of Chemical Munitions: (a) Prohibition of Transportation across State Lines — The Secretary of Defense may not transport any chemical munition that constitutes part of the chemical weapons stockpile out of the State in which that munition is located on the date of the enactment of this Act and, in the case of any such chemical munition not located in a State on the date of the enactment of this Act, may not transport any such munition into a State. (b) Transportation of Chemical Munitions Not in Chemical Weapons Stockpile — In the case of any chemical munitions that are discovered or otherwise come within the control of the Department of Defense and that do not constitute part of the chemical weapons stockpile, the Secretary of Defense may transport such munitions to the nearest chemical munitions stockpile storage facility that has necessary permits for receiving and storing such items if the transportation of such munitions to that facility — (1) is considered by the Secretary of Defense to be necessary; and (2) can be accomplished while protecting public health and safety.

More broadly, Executive Order 12938 (1994) declared a national emergency with respect to the unusual and extraordinary threat to the national security, foreign policy and economy of the United States posed by the proliferation of weapons of mass destruction and their means of delivery, a declaration which the President has renewed each year, as well as issuing new Executive Orders 13094 (1998) and 13382 (2005) amending Executive Order 12938, all of which enhance the ability of the United States to combat proliferation. The President most recently extended the emergency on 1 November 2012, through the "Notice — Continuation of the National Emergency with Respect to Weapons of Mass Destruction".[13] These orders have a range of effects, particularly on maintaining or enhancing regulatory and enforcement authorities.

The United States believes that reducing the risks of illicit finance associated with the nexus of terrorists, WMD proliferators and international criminal organizations requires a strong overall framework for combating money laundering and terrorist financing. The aspects of this framework most relevant for implementation of Security Council resolution 1540 (2004) include preventive measures for financial institutions (e.g., proper customer due diligence and targeted financial sanctions), strong inter-agency collaboration and international engagement, which align closely with the revised recommendations of the Financial Action Task Force (FATF) of February 2012 (especially recommendation 7).[14]

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[12] See 18 USC 2283, as amended 9 March 2006.

[13] http://www.whitehouse.gov/the-press-office/2012/11/01/notice-continuation-national-emergency-respect-weapons-mass-destruction.

[14] http://www.fatf-gafi.org/topics/fatfrecommendations/.

During the period covered by this report, the United States developed additional materials on effective practices to help protect financial institutions from engaging in WMD proliferation-related transactions and related services. The Financial Crimes Enforcement Network (FinCEN) issues, for example, advisories on systemic risks to the United States financial system and jurisdictions of particular concern for combating money laundering and terrorist financing. Among other information-sharing duties, FinCEN regulations require financial institutions to submit suspicious activity reports regarding certain types of financial activity. Based on these reports, FinCEN developed and issued a trade-based money laundering advisory relevant to countering proliferation finance, which provides examples of suspicious indicators or "red flags" that may indicate such money laundering.[15] This FinCEN advisory encourages financial institutions to use specific key terms to allow law enforcement authorities to access the suspicious activity reports quickly and readily as an effective practice.

Executive Order 13382 (2005) on "Blocking Property of Weapons of Mass Destruction Proliferators and Their Supporters" establishes the legal basis under which the United States includes WMD proliferators among the more than 6,000 names of persons, entities, groups and vessels targeted by United States financial sanctions on the Treasury Department list of Specially Designated Nationals (SDN) and Blocked Persons. Designation means that the United States blocks use of the target's property and interests in property, including funds and other assets, and prohibits United States persons from dealing in such blocked property without authorization from the Office of Foreign Assets Control (OFAC) in the Treasury Department. OFAC typically adds or amends "Non-proliferation Designations" or licenses related to such designations several times a month, among other sanctions designations.[16]

In making a designation, effective practice reveals the importance of having inter-agency mechanisms to facilitate sharing information across the financial, intelligence, law enforcement and policy communities, in accordance with domestic laws and authorities. In SDN designations, Treasury works with the Departments of State, Commerce, Justice (including the FBI and the Drug Enforcement Administration), DHS (particularly CBP and ICE-HSI) and Defense. It also works with bank regulatory agencies and other law enforcement and intelligence agencies. This approach fits with the July 2013 "FATF Best Practices Paper on Recommendation 2: Sharing among domestic competent authorities information related to the financing of proliferation", which focuses specifically on information sharing and exchange related to the financing of the proliferation of WMD.[17]

For financial institutions, the *2010 Federal Financial Institutions Examination Council (FFIEC) Bank Secrecy Act/Anti Money Laundering Examination Manual* establishes policies and procedures for United States bank examiners to use to help ensure compliance with requirements and obligations mandated by FinCEN and

[15] http://www.fincen.gov/statutes_regs/guidance/pdf/fin-2010-a001.pdf.

[16] For recent OFAC SDN actions, see http://www.treasury.gov/resource-center/sanctions/OFAC-Enforcement/Pages/OFAC-Recent-Actions.aspx.

[17] http://www.fatf-gafi.org/media/fatf/documents/recommendations/BPPpercent20on percent20Recommendation percent202percent20Sharing percent20among percent20domestic percent20competent percent20authoritiespercent20repercent20financingpercent20of percent20proliferation.pdf.

OFAC.[18] The manual provides guidance to financial institutions in identifying and managing risks associated with customers, products, services and geographic locales. These include foreign trade finance transactions identified in the 2008 FATF typology report as being particularly vulnerable to use for proliferation financing purposes. In terms of effective practices, the trade finance section of the FFIEC Manual identifies risk factors of interest to examiners and financial institutions, such as the involvement of multiple parties on both sides of an international trade transaction, over-or-under invoicing, use of fraudulent documents and disguising true identify or ownership on Letters of Credit.[19] In addition, the manual identifies specific risk mitigation measures for which financial institutions could apply and examiners should examine, such as established procedures for closely scrutinizing relevant documentation, conducting sufficient risk-based customer due diligence on Letter of Credit applicants and other parties to transactions, and monitoring transactions to identify potential suspicious activity.

The framework for OFAC non-proliferation controls stems from several other sources besides Executive Order 13382, including the "Highly Enriched Uranium Assets Control Regulations", "Weapons of Mass Destruction Proliferators Sanctions Regulations", "Weapons of Mass Destruction Trade Control Regulations" and the "New regulations to implement Executive Order 13382".[20] OFAC also includes a number of United Nations Security Council resolutions as part of its framework, including resolution 1540 (2004).[21]

The United States continues to take steps to enforce its prohibitions vigorously. Currently, several United States enforcement activities depend on the authority to regulate commerce under the International Emergency Economic Powers Act (IEEPA) of 1977, through which the President can block transactions, freeze assets and make criminal prosecutions. The United States Department of Justice handles prosecutions under the IEEPA.

ICE-HSI, the investigative arm of DHS and formerly that of the United States Customs Service, has been deeply involved in counterproliferation investigations for over 30 years. With the authority to investigate violations of all United States export laws related to military items, controlled dual-use items and sanctioned or embargoed countries, since October 2011 ICE-HSI has initiated 3,560 counterproliferation investigations which resulted in the arrest of 558 persons, 396 convictions and 1,763 seizures. Additionally, ICE-HSI successfully extradited 10 foreign-based targets for prosecution in the United States:

- Mahmoud Yadegari, an Iranian-Canadian, operated an international smuggling network based in the greater Toronto, Canada area. Yadegari was arrested by Canadian authorities and charged with violations of the United Nations Act as well as Canadian export law. The investigation of Yadegari was an

[18] The FFIEC was established to prescribe uniform principles, standards and report forms to promote uniformity in the supervision of United States financial institutions. It has six voting members: the Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, the National Credit Union Administration, the Office of the Comptroller of the Currency, the Office of the Thrift Supervision, and the State Liaison Committee.

[19] http://www.ffiec.gov/bsa_aml_infobase/pages_manual/OLM_079.htm.

[20] See 31 CFR Part 540, 31 CFR Part 544, 31 CFR Part 539 and 74 FR 16771-09, respectively.

[21] In addition to Security Council resolution 1540 (2004), OFAC lists resolutions 1696 (2006), 1737 (2006), 1747 (2007), 1803 (2008) and 1929 (2010).

international collaboration between United States and Canadian law enforcement authorities, as his crimes spanned violations of United States and Canadian law. Yadegari was arrested and convicted for his role in the diversion of goods of United States origin controlled for export for reasons of nuclear non-proliferation. Yadegari was convicted in the Canadian courts and sentenced to 51 months of confinement;

- Amir Ardebili functioned as a procurement agent for the Iran Electronics Institute and was responsible for the illicit transfer of millions of dollars of sensitive and export-controlled technology directly to the military of the Islamic Republic of Iran. Ardebili's operation spanned the globe and his actions were a violation of United States law. The investigation of Ardebili was an international collaboration between United States and foreign law enforcement partners, and resulted in Ardebili's arrest, conviction and sentencing to 60 months of imprisonment by United States authorities;

- Hok Shek Chan led an international criminal network responsible for the illegal procurement and trans-shipment of millions of dollars of military equipment for the Islamic Republic of Iran. Chan's operation spanned a period of 20 years. The investigation of Chan and his organization was an international collaboration between the United States and its foreign law enforcement partners. The international investigation resulted in Chan's arrest, extradition, conviction and subsequent sentencing to 42 months of incarceration by United States authorities.

In a further effort to focus on this growing national security threat, ICE-HSI created specialized Counter-Proliferation Investigations Centers in 12 major offices to maximize investigative resources in a more effective and efficient manner. The concept allows HSI to place specific resources, such as dedicated Counter-Proliferation Investigations Special Agents in strategic locations throughout the nation for the purpose of combating illegal exports and illicit procurement attempts of United States-origin technology.

Executive Order 13558 created the Export Enforcement Coordination Center (E2C2) in March, 2012. Housed within the Department of Homeland Security (DHS), the E2C2 serves as the focal point for law enforcement agencies to coordinate, de-conflict and enhance export investigations, serve as a conduit to the intelligence community and licensing agencies, coordinate national outreach efforts and establish integrated Government-wide statistical tracking capabilities to support export enforcement. The E2C2 is directed by ICE-HSI and includes 18 other Federal agencies with jurisdiction and enforcement authority over proliferation issues including the Department of State, the Department of Commerce and the FBI. The establishment of the E2C2 is a major step in enhancing the United States Government's efforts to combat illicit proliferation and recognizes the importance of inter-agency partnerships in enforcing its export mandates.

As discussed during the country visit of the Committee to the United States, the FBI established a Counterproliferation Center in July 2011 to identify and disrupt proliferation activities. The Center combines the operational activities of the FBI Counterintelligence Division, the subject matter expertise of the WMD Directorate and the analytical capabilities of the Directorate of Intelligence. Between the time of its inception in July 2011 and early June 2013, the Center has overseen the arrest of approximately 50 suspects, including several considered by

the United States intelligence community to be major proliferators.[22] Some recent arrests include:

- Glendon Scott Crawford and Eric J. Feight, charged with conspiracy to provide material support to terrorists following an investigation by the Albany, New York Joint Terrorism Task Force concerning a scheme to create a mobile, remotely operated device to kill victims with lethal doses of X-ray radiation. If convicted, each faces a maximum sentence of imprisonment for 15 years, a $250,000 fine and a term of supervised release of up to five years following any period of incarceration;

- James Everett Dutschke, charged with knowingly developing, producing, stockpiling, transferring, acquiring, retaining and possessing a biological agent, toxin and delivery system for use as a weapon (i.e., ricin), and with attempting, threatening, and conspiring to do the same. If convicted on this charge, Dutschke faces maximum possible penalties of life imprisonment, a $250,000 fine and five years of supervised release. The investigation involved cooperation among the Mississippi and Memphis, Tennessee Joint Terrorism Task Forces, the United States Secret Service, the United States Postal Inspection Service, the United States Capitol Police, the United States Attorney's Office for the Northern District of Mississippi and the Counterterrorism Section of the Justice Department's National Security Division, assisted by several local authorities, namely the Mississippi National Guard 47th Civil Support, Mississippi Office of Homeland Security, Lee County Sheriff's Office, Prentiss County Sheriff's Office, Corinth Police Department, Tupelo Police Department and the Booneville Police Department.

In addition to the effective national practices identified elsewhere in this section, the United States offered several recommendations on effective practices regarding the implementation of Security Council resolution 1540 (2004) prohibitions during the country specific visit by the Committee in 2011. These included:

- Complex and diverse legal frameworks can cover the prohibitions of the resolution both by amending "legacy" legislation and by adopting new legislation;

- Taking a strategic "whole-of-government" approach can help integrate national policy related to resolution 1540 (2004), make them national priorities, and reinforce the network of interdepartmental and inter-agency committees and joint operations;

- Having a broad range of offenses and penalties to give officials flexibility to match the most effective penalties with different levels of offenses and covers both non-State actors operating without lawful authority and legally authorized activities by persons regarding nuclear weapons, engaged in dismantling stocks of chemical weapons, or working on biological weapons-related agents for permitted uses who might misuse their authorization.

[22] Robert S. Mueller, III, Director, Federal Bureau of Investigation, Statement before the House Committee on the Judiciary, Washington, D.C., 13 June 2013.

## Operative paragraph 3 (a) and (b) — accounting, securing and physical protection

**(a) Develop and maintain appropriate effective measures to account for and secure such items in production, use, storage or transport; (b) Develop and maintain appropriate effective physical protection measures**

During the period covered by this submission, the United States took a range of resolution 1540 (2004) actions under existing domestic measures to account for, secure and physically protect resolution 1540 (2004) "related materials". Several of these measures require close inter-agency cooperation to implement. Securing the transport of radioactive materials, for example, concerns both the NRC and the Pipeline and Hazardous Materials Safety Administration of the Department of Transportation (DOT). The NRC sets the requirements for the design and manufacture of packaging for larger quantities of radioactive materials, while the Pipeline and Hazardous Materials Safety Administration regulates the actual shipments, the packaging of small quantities and the labelling standards.[23]

The United States also looks to the latest international standards in implementing these obligations under the resolution. As an effective practice, for example, DOT regulations specifically authorize shippers to use the Technical Instructions for the Safe Transport of Dangerous Goods by Air of the International Civil Aviation Organization, the International Maritime Dangerous Goods Code, Transport Canada's Transportation of Dangerous Goods Regulations and the International Atomic Energy Agency (IAEA) Regulations for the Safe Transport of Radioactive Material. Multiple international bodies and United States Government bodies contribute to the development of these standards and instructions, not just DOT.[24]

During the country visit by the Committee, however, officials also made clear that what constitutes "appropriate effective" in the nuclear or biological fields often differs in different parts of the United States , for different agencies and at different times. The lesson learned: even inside a country, no one size fits all.

*Nuclear weapons and nuclear weapons-related materials*[25]

Since the last update of its Committee matrix in 2010, the United States has strengthened its controls over nuclear weapons related material through new laws, regulations, policies, guidance and practices, as described below. Notably, the United States has greatly accelerated its efforts to reduce nuclear and radiological threats since the pledge by President Obama in April 2009 to secure all vulnerable nuclear material in four years, especially in conjunction with the Nuclear Security Summit process. The National Nuclear Security Administration (NNSA) of the Department of Energy (DOE) serves as the primary United States agency

[23] See 49 CFR Parts 171-177.

[24] See 49 CFR Part 171.22.

[25] The phrase "related materials" here and throughout the document refers to such materials as defined in Security Council resolution 1540 (2004), which broadly references items covered in international treaties, conventions, and multilateral arrangements. As the resolution specifically references the IAEA Code of Conduct on the Safety and Security of Radioactive Sources, this report includes controls on "risk significant radioactive materials" as well as special nuclear material, etc.

responsible for the domestic management and security of United States nuclear weapons, nuclear non-proliferation and United States Government reactor programmes. NNSA discharges its non-proliferation responsibilities through several initiatives and programme offices, including the Global Threat Initiative, the Office of Nonproliferation and International Security, the Office of International Material Protection and Cooperation, the Office of Fissile Materials Disposition and the Office of International Operations.

To assure the security and physical protection of its nuclear weapons and materials, the United States has a host of measures in place, including several it recently updated. Examples include:

- Department of Defense Directives 3150.2 and 4540.5 "Nuclear Weapons Surety Program" of 24 April and 15 August 2013, respectively, which replaced 3150.2 "Nuclear Weapon System Safety Program" and 4540.5 "Logistic Transportation of Nuclear Weapons"
- Department of Defense Directive 5210.41 "Security Policy for Protection Nuclear Weapons", the 17 April 2012 reissue of Department of Defense Directive 5100.76-M "Physical Security of Sensitive Conventional Arms, Ammunition, and Explosives"
- In July 2011, DOE replaced its Order 5610.2 "Control of Nuclear Weapons Data" with Order 452.8, regarding safeguarding and security of restricted data or formerly restricted data, including revised civil penalties
- Department of Defense Instruction 5210.02 "Access to and Dissemination of Restricted Data and Formerly Restricted Data" of 3 June 2011
- On 26 August 2010, the Department of Defense (DoD) issued S-5210.92-M "Physical Security Requirements for Nuclear Command and Control (NC2) Facilities (Unclassified)" building on the 13 July 2009 issuance of its Nuclear Weapon Security Manual (Unclassified)
- Department of Defense Instruction 5210.63 "DoD Procedures for Security of Nuclear Reactors and Special Nuclear Materials" of 21 November 2006, which updates responsibilities, procedures and minimum standards for safeguarding DoD nuclear reactors and Special Nuclear Materials
- 2006 Army Regulation (AR) 190-54 "Security of Nuclear Reactors and Special Nuclear Materials"[26]

In parallel, NRC and Agreement States[27] regulate the civilian uses of nuclear and radioactive material, including accounting for, securing and physically protecting commercial nuclear power plants, commercial fuel cycle facilities, nuclear weapons grade material, spent nuclear fuel, source material and by-product materials. Within the NRC, several programme offices are responsible for ensuring the secure use of nuclear and radioactive materials through regulation, licensing and

[26] This replaces Department of Defense Directive 3150.2 "Nuclear Weapon System Safety Program".

[27] Section 274 of the Atomic Energy Act of 1954, as amended, provides a statutory basis under which NRC relinquishes to the States of the United States portions of its regulatory authority to license and regulate byproduct materials (radioisotopes); source materials (uranium and thorium); and certain quantities of special nuclear materials.

oversight which include the Office of Nuclear Security and Incident Response, the Office of Nuclear Material Safety and Safeguards, the Office of Federal and State Materials and Environmental Management Programs and the Office of International Programs.

NRC licensees are responsible for complying with NRC regulations and requirements. NRC oversees compliance through inspection and enforcement activities. Primary responsibility for nuclear material safeguards and security at NRC-licensed commercial facilities rests with facility operators. The NRC provides security regulatory oversight of commercial nuclear facilities by developing security policies and regulations, implementing a rigorous programme of baseline and force-on-force inspections and taking appropriate enforcement actions.

For securing civilian facilities with radioactive materials, the NRC has implemented many measures to improve security including issuance of orders requiring the regulated community to implement additional security measures during use and storage of the material. Since issuance of the orders, the NRC has amended its security regulations within Title 10 of the Code of Federal Regulations (CFR). Most notably, the NRC over the last five years has amended 10 CFR Part 73, "Physical Protection of Plants and Materials" and, in 2013, promulgated security regulations, 10 CFR Part 37, "Physical Protection of Category 1 and 2 Radioactive Materials". Part 73 addresses the security of special nuclear material, consistent with the Convention on Physical Protection of Nuclear Material. Part 37 tackles the security of risk significant radioactive material, consistent with the IAEA Code of Conduct on the Safety and Security of Radioactive Sources. The NRC works with a variety of Federal and state partners to fulfil its mission. For example, in 2011 the NRC agreed to a process for consulting with DHS prior to licensing regarding security vulnerabilities associated with the security of chemicals for proposed facilities subject NRC regulations through a memorandum of understanding.[28]

NRC has in place regulations to address accounting for and physical protection of material. Material control and accounting of special nuclear material regulations appear under 10 CFR Part 74. The physical protection of such material is found under 10 CFR Part 73. In addition, the United States has entered into an agreement with the IAEA to maintain a national system to account for source and special nuclear material, with the information going into the Nuclear Materials Management and Safeguards System (NMMSS) jointly operated by the NRC and NNSA. The NMMSS evolved from historical efforts to move away from manual nuclear materials information management and respond to the increasing uses for nuclear materials safeguards information. The NMMSS incorporates a wide range of data in electronic formats, such as inventories, material balance and transactions. In 2005, a task team conducted a review of Department of Energy NMMSS reporting requirements in pursuit of the objective of reducing DOE and NRC reporting differences and to update the NMMSS to reflect the current material accounting information needs of the Department of Energy. The review led to either elimination or change in certain reporting requirements and identified other requirements that could lead to further changes in facility reporting. The changes appear in DOE M 470.4-6, "Nuclear Material Control and Accountability", approved 26 August 2005. In early 2013 the IAEA had one site under inspection, the K Area Material Storage Vault at Savannah River National Laboratory under the Department of Energy.

[28] See http://pbadupws.nrc.gov/docs/ML1027/ML102720798.pdf.

The United States voluntarily entered into a Safeguards Agreement with the IAEA (in force in 1980) that has obligations similar to those accepted by other countries, subject to exclusion for national security purposes, even though the NPT does not require the United States to undergo international safeguards. NRC regulations contain requirements for NRC and Agreement State licensees, applicants and certificate holders to ensure that the United States meets its nuclear non-proliferation obligations under international safeguards treaties.[29] In 2011, the NRC identified 263 NRC licensed facilities as eligible for safeguards. In addition, three NRC licensed nuclear fuel fabrication facilities provide information under the Safeguards Agreement reporting protocol, although not under an IAEA inspection regime.[30]

Under its Next Generation Safeguards Initiative, the NNSA promotes a "Safeguards By Design" approach. Developed in conjunction with the IAEA, industry and other countries, the concept seeks to fully integrate international safeguards into the design process of a new nuclear facility from the initial planning through design, construction, operation, and decommissioning. Successful implementation of Safeguards by Design could help avoid costly and time-consuming retrofits to nuclear facilities as well as increase both the effectiveness and efficiency of safeguards implementation. To that end, the NNSA now provides a series of guidance documents on effective practices, mainly based on the type of nuclear facility.[31]

In July 2011, United States Secretary of State Clinton and Russian Foreign Minister Lavrov exchanged diplomatic notes bringing the United States/Russian Federation Plutonium Management and Disposition Agreement and its Protocols into force. The agreement commits each side to verifiably dispose of at least 34 metric tons of weapon grade plutonium declared excess to defence needs. That same year the United States and the Russian Federation began trilateral talks with the IAEA on an agreement to enable the IAEA to verify the United States and Russian plutonium disposition programmes conducted under the agreement.

The United States also has augmented its efforts to account for and secure the production, use, storage and transport of nuclear related materials through its adoption of the Additional Protocol for IAEA Safeguards. The Bureau of Industry and Security (BIS) in the Department of Commerce executes these measures through its Additional Protocol Regulations under the authority of the United States Additional Protocol Implementation Act of 2006 and Executive Order 12458 (2008).[32] The IAEA Model Additional Protocol serves as the basis for the regulations, including implementing complementary access to, inter alia, locations to assure the absence of undeclared nuclear material and to verify the decommissioning of locations formerly storing nuclear materials. The only exception arises for activities that have direct United States significance for national security, or associated locations and information. Nonetheless, the regulations even allow for some limited, managed access to such locations and information.[33] BIS

[29] See 10 CFR Parts 75 and 110.

[30] See http://www.nrc.gov/about-nrc/ip/intl-safeguards.html.

[31] http://nnsa.energy.gov/aboutus/ourprograms/nonproliferation/programoffices/officenonproliferationinternationalsecurity-0-0.

[32] See 10 CFR Parts 781-786.

[33] See IAEA INFCIRC/540 at http://www.iaea.org/Publications/Documents/Infcircs/index.html.

has a website dedicated to supporting United States implementation of the Protocol, and produces a *Report Handbook for Locations* and a *Report Handbook for Sites* to assist in implementation.[34]

With regard to risk significant radioactive materials, as an interim measure the NRC implemented orders requiring additional security on spent fuel transportation, radioactive source manufacturing and distribution, and large underwater and panoramic irradiators. Following these orders, the NRC and Agreement States issued additional security measures to other medical, academic and industrial applications of category 1 and 2 materials (e.g. self shielded irradiators, gamma knives, well logging, radiography, etc.). Since issuance of the orders, the NRC and Agreement States continued inspecting licensees for compliance with security requirements and began the public process to establish security rules in the Federal regulations to replaces the seven sets of orders and provide generally applicable requirements to a broad scope of licensees. Comprehensive security rule 10 CFR Part 37 "Physical Protection of Category 1 and 2 Radioactive Materials" became effective on 10 May 2013. Additionally, in an effort to better track transactions of radioactive materials, the NRC developed a portfolio of automated tools which consists of three significant information technology applications, the National Source Tracking System (NSTS), the Web-Based Licensing (WBL) System and the License Verification System (LVS). The NSTS allows State and Federal agencies to track transactions of Category 1 and 2 materials from origin (manufacture or import), through transfer to another licensee, to disposition (disassembly, disposal, export or decay below the level of tracked sources). The NSTS is in its fifth year and tracks over 80,000 Category 1 and 2 sources held by more than 1,300 licensees across the United States and its territories. The WBL system, deployed in August 2012, is an NRC and Agreement State material licensing system that manages the licensing information of businesses that use Category 1 and 2 materials. The WBL system allows the NRC and Agreement States to manage the licensing lifecycle from initial application to license issuance, amendment, reporting and license termination. Finally, the LVS is a "national verification system", deployed May 2013, that accesses NRC and Agreement State license information and provides assurance that only authorized licensees obtain radioactive materials in authorized amounts. The LVS is an integrated service that brokers information stored in WBL and NSTS to confirm that a license is valid and accurate; a licensee is authorized to acquire specific quantities and types of radioactive materials; and the licensee's Category 1 or 2 inventories will not exceed its possession limits.

The NRC also produces many general guidance and reference documents. It issues regulatory guides under 10 broad divisions: power reactors; research and test reactors; fuels and materials facilities; environmental and siting; materials and plant protection; products; transportation; occupational health; antitrust and financial review; and general.[35] Since 2006, the NRC has sought to update its regulatory

[34] http://www.ap.gov.

[35] For links to the divisions and other reference information, see http://www.nrc.gov/reading-rm/doc-collections/reg-guides/.

guides, with some now completed and other expected completion dates in 2013 and beyond.[36]

In March 2011, the IAEA Integrated Regulatory Review Service team issued a report comparing United States regulatory infrastructure to international standards.[37] The report concludes that the NRC had adequately demonstrated that relevant IAEA International Nuclear Safety Group Recommendations had been met through "developing and issuing regulations; developing a safety and security culture policy; ensuring adequate communications; and preparing for and testing emergency preparedness". The report identifies two good United States practices in interfaces with nuclear security and two suggested practices that the United States should consider. More importantly, the report points to several dozen good practices that the IAEA has identified through its review process that many member States might find useful.

Security measures at NRC-licensed nuclear facilities in the United States are subject to rigorous inspections. In 2012, NRC conducted 23 force-on-force performance evaluation and over 180 baseline security inspections at nuclear power plants and Category 1 fuel facilities. Additional security inspections were performed at NRC facilities of other types. With regard to risk significant sources, it is estimated that NRC conducted about 150 security inspections of licensees with Category 1 and 2 materials in 2012, and the Agreement States conducted about 300 security inspections. During fiscal year 2012 the NRC found no losses or thefts of Category 1 radioactive sources. The three Category 2 sources lost or stolen during that year were recovered, and similarly, the seven Category 3 sources lost during fiscal year 2012 were recovered.

The United States recognizes that it must continue to address challenges to the security of its nuclear materials, as evidenced by the 28 July 2012 incident involving unauthorized access by three persons to the area surrounding the Highly Enriched Uranium Materials Facility at the Y-12 National Security Complex in Oak Ridge, Tennessee. Three persons gained access to the exterior of the facility and defaced the building. In response, DOE began to implement corrective measures while its Office of Inspector General initiated an investigation. The Inspector General found numerous deficiencies in the security measures in place at the time, including weaknesses in communication, equipment and procedures, and made additional recommendations to strengthen security at the facility and ensure no further unauthorized access, as well as a lessons learned report to share throughout the United States nuclear weapons complex. The Inspector General issued the official report in August 2012.[38]

Looking further into the future, the United States has developed several rulemaking initiatives to enhance its materials control and accounting regulations and its regulations on physical protection of plants and materials, particularly for special nuclear material and fuel cycle facilities. As part of the fuel cycle security rulemaking, the NRC is reviewing and is considering for incorporation as

[36] To see the status of Regulatory Guides Reviewed/Developed by Fuel Cycle Safety and Safeguards (FCSS), go to http://www.nrc.gov/materials/fuel-cycle-fac/regs-guides-comm/reg-guides-status.html.

[37] See www.nrc.gov/public-involve/conference-symposia/irrs-mission-review/irrs-mission-report.pdf.

[38] See http://energy.gov/sites/prod/files/IG-0868_0.pdf.

appropriate into its regulatory framework the guidance and best practices found in the IAEA "Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities" (INFCIRC/225/Revision 5). The NRC rulemaking also involves consideration of physical protection measures that more accurately reflect the attractiveness of different forms of special nuclear materials to malevolent actors, inclusion of NRC Security Orders issued in the aftermath of the 11 September 2001 terrorist attacks directly into NRC regulations, and consideration of the agency's operating experience and evolved security technologies. In recent years, the NRC also has made significant improvements in the area of cybersecurity by developing cybersecurity regulations for power reactors, publishing associated technical guidance documents and creating a road map for addressing cybersecurity issues at nuclear facilities other than power reactors. With the promulgation of 10 CFR Part 37 and its associated guidance documentation, the NRC is developing a "Best Security Practices" guide for licensees with Category 1 and 2 materials to aid them when setting up a physical protection programme.

Notably, the NRC will host an IAEA International Physical Protection Advisory Service mission from 30 September to 11 October 2013, fulfilling a commitment made at the 2010 Nuclear Security Summit. The mission will review United States physical protection measures in place in comparison with international guidelines and internationally recognized best practices and, based on the review, make recommendations for further improvements and follow-up activities. It will also review physical protection measures at the NRC-licensed research reactor facility at the National Institute of Standards and Technology.

Conversion and protection also play important roles in United States efforts to secure vulnerable nuclear material. Through the NNSA's Global Threat Reduction Initiative (GTRI), for example, the United States continues to find new and innovative ways to minimize and eliminate the civilian use of highly enriched uranium (HEU), including in research reactors and isotope production, both domestically and abroad. Since 2004, GTRI has helped convert or shut down all United States nuclear reactors capable of conversion with existing licensed low enriched uranium (LEU) fuel. It continues to work on a replacement LEU fuel and related fuel fabrication capability for the six remaining high performance research reactors in the United States that cannot convert with existing fuel types. In that regard, the NNSA works with the NRC for the qualification and licensing of a new high-density LEU fuel, with the first application after licensing going to the conversion of the high performance research reactor at the Massachusetts Institute of Technology.

In addition, as of April 2013, GTRI had completed security enhancements above and beyond the measures required by NRC regulations at more than 500 buildings in the United States that contain risk significant radiological sources and had installed GTRI-developed in-device delay security technology to more than 200 cesium irradiators in the United States in this effort. Through its Off-Site Source Recovery Program, as of April 2013 the GTRI had recovered more than 32,000 disused, excess or unwanted radioactive sources from NRC or Agreement State licensees. For example, in March 2013 the NNSA announced the shipment of a medical research device using a cesium-137 irradiator from Temple University in Philadelphia, Pennsylvania to a secure location, which it accomplished in cooperation with the University, state and local regulators and the Los Alamos and Idaho National Laboratories. This reflects the longer term cooperation with domestic

stakeholders. In Philadelphia alone, the GTRI has helped secure 28 buildings with high-activity radiological materials, provide radiological security alarm response training to local law enforcement officers, site security and other first responders, and co-hosted with the FBI a table-top exercise with Federal, State and local officials on responding to a terrorist event involving nuclear or radiological materials.

During the reporting period, the United States made other changes to strengthen the legal framework for accounting for, securing and the physical protection of nuclear weapons related materials, including:

- The NRC issued a new rule, "Physical Protection of Irradiated Reactor Fuel in Transit", to amend its security regulations to incorporate earlier Security Orders and establish new performance standards and objectives for protecting such shipments against malevolent activities effective as of 19 August 2013[39]
- DOE made administrative changes on 19 November 2012 to DOE Order 474.2, Change 2 (Final version), "Nuclear Material Control and Accountability".[40] This Order establishes the performance objectives, metrics and requirements for developing, implementing and maintaining a nuclear material control and accountability programme within NNSA and for DOE-owned materials at other facilities exempt from NRC licensing, cancelling DOE M 470.4-6
- DOE Order 473.3 of 27 June 2011 establishes requirements for the management and operation of the DOE Federal Protective Forces (FPF), Contractor Protective Forces (CPF) and the Physical Security of property and personnel under the cognizance of DOE, combining into one Protection Program Operations order the baseline requirements found in the manuals for physical protection, CPF and FPF.[41] The Order establishes requirements for the physical protection of various DOE interests, including facilities, buildings, government property, employees, classified information, special nuclear material and nuclear weapons, using a graded approach from lowest to most critical

The United States has proposed strengthening several other legal measures in the near future:

- The NRC proposed a new rule on 16 May 2013, "Revisions to Transportation Safety Requirements and Harmonization with International Atomic Energy Agency Transportation Requirements", to amend its regulations to conform to changes in the IAEA and DOT regulations
- In April 2013, DOE issued a Notice of Intent to Review DOE Guide 413.3-3 Safeguards and Security for Program and Project Management to align the key safeguards and security components in its capital assets programme and project management phases
- In February 2013, DOE issued a Notice of Intent to Review DOE Order on Nuclear Counterterrorism of 2006 and the cancellation of the 2006 Manual on Control of Improvised Nuclear Device Information, intending to consolidate

[39] See 10 CFR Part 73.

[40] See https://www.directives.doe.gov/directives/0474.2-BOrder-AdmChg2/view.

[41] See https://www.directives.doe.gov/directives/0473.3-BOrder/view.

the United States National Authority — i.e., the Department of State — of their exclusion from these regulations), and requires access for on-site inspections and monitoring by the Organization for the Prohibition of Chemical Weapons (OPCW). BIS maintains the United States CWC website to ensure and assist in industry compliance with the Convention and United States regulations.[49] The United States has hosted numerous inspections by the OPCW in compliance with its obligations under the treaty.

The United States controls to secure and physically protect chemical weapons-related materials primarily through the Chemical Facility Anti-Terrorism Standards (CFATS) programme in the National Protection and Programs Directorate, Office of Infrastructure Protection (OIP), Infrastructure Security Compliance Division of DHS. The OIP also works closely with the United States Coast Guard (USCG), the Transportation Security Administration (TSA), the FBI, the Bureau of Alcohol, Tobacco, Firearms and Explosives, the NRC and the Environmental Protection Agency (EPA) on chemical security matters.[50] The list of Chemicals of Interest (COI) for the CFATS programme specifically includes all the CWC Schedules 1, 2 and 3 chemicals that are immediate precursors for chemical warfare agents, all of which are also on the Australia Group's Chemical Weapons Precursors List.[51] The CFATS regulatory programme focuses on security at high-risk chemical facilities. Facilities possessing COI that are identified by DHS as high-risk must develop, submit for DHS review and implement upon DHS approval a Site Security Plan or an Alternative Security Program to meet the applicable 18 risk-based performance standards under CFATS.

By early 2013, CFATS had determined that about 10 per cent of the roughly 44,000 facilities with COI fell into the category of high-risk, with more than 3,000 considered high based on the risk of theft or diversion, which mainly applies to chemical weapons, chemical weapons precursors and chemicals for weapons of mass effect. In a notably effective practice, more than 2,000 facilities essentially screened themselves out of the programme by eliminating or modifying their use of COI, essentially making these facilities proliferation resistant. In addition, DHS has more than 100 chemical security inspectors to help ensure facilities have security measures in place to meet CFATS requirements. So far, DHS had conducted 1,202 visits to assist facilities with CFATS compliance, authorized 280 Site Security Plans, and approved 53 Site Security Plans following an on-site inspection. DHS has undertaken or planned several steps since 2012 to improve the pace of Site Security Plan approvals.

DHS has proposals for revisions to CFATS under review, including the CFATS Personnel Surety Program Notice and Request for Comments published on 22 March 2013 entitled "Information Collection Request; Chemical Facility Anti-Terrorism Standards Personnel Surety Program", aimed at improving approaches to reduce the risk of illicit access to these facilities and COI.[52] In addition, President Obama issued an Executive Order "Improving Chemical Facility Safety and Security" on August 1, 2013, which establishes an inter-agency Chemical Facility Safety and

[49] http://www.cwc.gov/index.html.

[50] The CFATS authority stems from Section 550 of the Department of Homeland Security Appropriations Act of 2007, Public Law 109-295.

[51] FR 65396, 65403 (Nov. 20, 2007).

[52] See 78 FR 17680.

- "Possession, Use, and Transfer of Select Agents and Toxins", which falls under the USDA Animal and Health Inspection Service regulations[56]
- "Possession, Use, and Transfer of Select Agents and Toxins", under the USDA Animal and Plant Health Inspection Service regulations on organisms and vectors for viruses, serums, toxins and analogous products[57]
- "Select Agents and Toxins", under quarantine, inspection and licensing in the DHS Public Health Service regulations[58]

In order to implement the new regulations, the United States has developed several initiatives on effective practices, including a joint inspection programme between the Select Agent Program and the other Federal agencies that fund or own entities conducting work on select agents or toxins that has generated at least two dozen joint inspections; a set of memoranda of understanding between the Select Agent Program and DHS, DoD, DOE EPA and the Veterans Health Administration to share information relevant to the Program; and training for DoD and DHS personnel to assist them in conducting internal inspections either on their own or as part of the joint inspection programme. The Select Agent Program also issued at least 19 guidance documents in 2012, including "Security Guidance for Select Agent or Toxin Facilities".[59] More generally, the FBI and CDC conducted six Joint Criminal and Epidemiological Investigations training courses during 2012, an effective practice for fostering familiarity between the United States law enforcement and public health communities for their distinct investigative approaches that can generate sharing of information, expertise and resources of mutual benefit.

On 29 March 2012, the United States issued its "Government Policy for Oversight of Life Sciences Dual Use Research of Concern".[60] The United States intends to employ this policy to establish regular review of United States Government funded or conducted research with certain high-consequence pathogens and toxins for its potential as dual-use research of concern (DURC) in order to mitigate risks where appropriate and collect information needed to inform the development of an updated policy for the oversight of DURC. The United States intends to use this oversight capacity to preserve the benefits of life sciences research while minimizing the risk of its misuse. The policy requires that Federal agencies assess the potential risks and benefits of DURC projects and determine whether risk arises from access to the information, products or technologies resulting from the research. Based on this assessment, the Federal agency, in collaboration with the institution or researcher conducting the research, must develop an appropriate risk mitigation plan or take other actions if it cannot mitigate such risks adequately.

The United States notes a number of biosecurity regulations issued by the United States defence community that existed in December 2010, but did not appear in the United States matrix for the Committee, including: Army Regulation (AR) 190-17 Biological Select Agents and Toxins Security Program; AR 50-1 Biological

[56] 7 CFR Part 331.
[57] 9 CFR Part 121.
[58] 42 CFR Part 73.
[59] For a complete list of all of the guidance issued to date, see http://www.selectagents.gov/.
[60] http://www.phe.gov/s3/dualuse/Documents/us-policy-durc-032812.pdf.

Surety; AFI 10-3901 Minimum Security Standards for Safeguarding Biological Agents and Toxins; AR 190-13 Army Physical Security Program; AR 525-13 Antiterrorism; OPNAV 5530.16 Minimum Security Standards for Safeguarding Biological Select Agents and Toxins (BSAT); DoD 5210.89 Minimum Security Standards for Safeguarding Biological Select Agents and Toxins; and DoD 4500-9R Defense Transportation Regulation.[61] The Department of Defense also had issued its manual "Safety Standards for Microbiological and Biomedical Laboratories", DoD 6055.18-M, on 11 May 2010. More recently, DoD has implemented the 29 March 2012 "United States Policy for Oversight of Life Sciences Dual Use Research of Concern" in its facilities and projects.

In addition, the United States discussed other biosecurity best practices documents during the country visit by the Committee. These include:

- "Enhancing Responsible Science — Considerations for the Development and Dissemination of Codes of Conduct for Dual Use Research".[62] This report was issued by the National Science Advisory Board for Biosecurity (NSABB) in February 2012 in response to a request from the United States Government for advice on the development, utilization and promotion of codes of conduct for dual-use research for interdisciplinary life scientists and relevant professional groups.[63] In addition to providing recommended strategies to develop a code of conduct with strong institutional support and considerations for dissemination of the code, the report includes two specific tools and a toolkit for developing and disseminating a code of conduct and an educational module on dual-use research. The NSABB has produced several other documents with recommendations and strategies to enhance biosecurity

- The CDC publication, "Biosafety in Microbiological and Biomedical Laboratories", currently in its fifth edition but updated as needed, serves as a nationally and internationally recognized source for the standards and special microbiological practices, safety equipment and facilities to work with a variety of infectious agents in various laboratory settings. The publication utilizes four biosafety levels (biosafety levels 1 through 4) for work with pathogenic microorganisms based upon a risk assessment of relevance to the implementation of Security Council resolution 1540 (2004) and the nexus between biosafety and biosecurity[64]

United States officials also noted that a real-time polymerase chain reaction capacity and digital identification tools for seeds or insects reduced diagnostic time, considerably increasing the speed of determining the presence of a pest, including a select agent or toxin. They also asserted that setting the standards for laboratory due diligence on biosecurity at a minimum level in the early stages of the policy

[61] See the report at http://crisc.orau.gov/cmi/scapa/files/biosecurity-report.pdf.

[62] http://oba.od.nih.gov/oba/biosecurity/documents/COMBINED_Codes_PDFs.pdf.

[63] Ibid.

[64] http://www.cdc.gov/biosafety/publications/bmbl5/.

increased the likelihood of their implementation, rather than starting at a higher level.[65]

*Means of delivery and related materials*

In 2011, the United States further adapted to the growth of its emerging private sector space flight industry by amending the 1984 Commercial Space Launch Act. The Amended Act clarifies the regulatory and licensing authorities of the DOT, the Federal Aviation Administration and the Office of Commercial Space Transportation. In furtherance of implementation of the Act, the Federal Aviation Administration amended and updated its safeguard requirements on the storage and handling of solid propellants, energetic liquids or other explosives at launch and payload preparation sites in November 2012.[66]

## Operative paragraph 3 (c) — border controls

**Develop and maintain appropriate effective border controls and law enforcement efforts to detect, deter, prevent and combat, including through international cooperation when necessary, the illicit trafficking and brokering in such items in accordance with their national legal authorities and legislation and consistent with international law**

The United States has a complex set of legal and regulatory measures that apply to its border control obligations under Security Council resolution 1540 (2004), most of which existed prior to the resolution. These include, as amended, the Tariff Act, the Immigration and Nationality Act, the Aviation and Transportation Security Act, the Trading with the Enemy Act, laws on smuggling and customs duties and the International Emergency Economic Powers Act (IEEPA), among others. DHS continues to have the primary responsibility for controlling United States borders for trafficking and brokering in WMD-related materials, which it implements mainly through CBP, ICE-HSI, USCG, TSA and DNDO. In addition to its border patrol agents and customs officers, CBP has air and marine assets for border protection, field scientists with advanced technical resources, mobile response teams and a special operations group.

ICE-HSI has 75 offices in 48 countries, which expands its domestic enforcement capability by fostering partnerships with foreign counterparts in Customs and national police agencies and thereby broadens the effective efforts of proliferation enforcement well beyond United States borders. In 2012, ICE-HSI

[65] United States officials also noted some international activities where they had identified effective biosecurity practices, including the Southern Caucasus Workshop on Public Health, Security, and Law Enforcement Partnership in Bio-Incident Pre-Planning and Response and the associated Southern Caucasus BioShield 2010 Tabletop Exercise, 11 and 12 May 2010, Tbilisi, Georgia (see the report at http://www.phe.gov/Preparedness/international/Pages/southerncaucasus.aspx); Trilateral (United States-Romania-Republic of Moldova) Civilian-Military Forum on Outbreak Response and Bioterrorism Investigation (ORBIT Forum), 19-21 October 2010, Chisinau, Republic of Moldova (see report at http://www.phe.gov/Preparedness/international/Pages/orbitforum.aspx); and Countering Biological Threats: National Implementation of the Biological Weapons Convention and Multinational Outbreak Response and Bioterrorism Investigation, 17-19 May 2011, Tbilisi, Georgia (see report at http://www.phe.gov/Preparedness/international/Pages/counteringthreats.aspx).

[66] See http://www.gpo.gov/fdsys/pkg/FR-2012-09-07/pdf/2012-21922.pdf for 14 CFR Part 420.

foreign offices were involved in 17 separate investigations in 10 countries. In addition, ICE-HSI conducts global outreach providing training to foreign partners that strengthens the bilateral ties and opportunities for mutual participation in enforcement efforts. In 2012, ICE-HSI provided training in counter proliferation on 25 occasions for 20 different countries.

CBP continues to extend the distance and time outside of United States borders, in close cooperation with its trade partners, for detecting and preventing illicit activity. These programmes enhance operational cooperation and, where appropriate, build the capacity of border control officials of United States trade partners thereby enhancing the global effort to implement Security Council resolution 1540 (2004). Announced in January 2002, the Container Security Initiative (CSI) addresses the threat to border security and global trade by deploying CBP Officers to foreign seaports to work with their host Government counterparts to identify potentially high-risk cargo before it is shipped to the United States. CSI protects the United States from terrorist threats and acts of terror in the international maritime supply chain while facilitating legitimate trade. Approximately 80 per cent of maritime containerized cargo destined to the United States originates in or transits through a CSI port and is screened prior to being laden aboard a United States-bound vessel. At present, CSI is operational in 58 ports and 32 countries.

For air cargo, CBP announced the formalization and expansion of its Air Cargo Advance Screening (ACAS) pilot in October 2012, which began with an earlier voluntary agreement with four express air courier companies. The programme allows members of the air cargo industry to send and receive advance security filing data for their air cargo to CBP and TSA as early as possible, allowing CBP and TSA to identify high-risk shipments that require additional physical screening prior to loading. By the summer of 2012, approximately 30 passenger carriers, freight forwarders, all-cargo carriers and express couriers participated in or had begun testing to become participants. CBP published "Air Cargo Advance Screening Pilot Frequently Asked Questions" to help explain the programme.[67] In addition, TSA and the European Commission announced a new air cargo security partnership with the European Union and Switzerland in June 2012 to allow for better information sharing and enhanced security measures, while moving cargo more efficiently.

The ACAS pilot reflects the broader CBP view that effective United States border control practices for the highest level of cargo security depends on close cooperation with the ultimate owners of the international supply chain such as importers, carriers, consolidators, licensed customs brokers and manufacturers, most notably through its voluntary Customs-Trade Partnership Against Terrorism (C-TPAT) programme, described in earlier United States submissions to the Committee. C-TPAT facilitates United States customs procedures for those entities that adopt enhanced measures for securing the supply chain.

CBP uses an extensive array of technical means to support its border control mission, such as personal radiation detectors; radiation isotope identification devices; vehicle and cargo inspection systems; and Z backscatter X-ray vehicles. CBP's Laboratories and Scientific Services operates the Teleforensic Center, located at the National Targeting Center, for 24-hour support to DHS field officials for adjudication of radiation-detection events and other suspected WMD-related cases.

[67] See http://www.cbp.gov/xp/cgov/trade/cargo_security/cargocontrol/acasp_faq.xml in July 2012.

In close cooperation with CBP, TSA, USCG and other agencies, the DHS Domestic Nuclear Detection Office (DNDO) serves as the primary United States Government entity for implementing domestic nuclear detection efforts, as well as integration of Federal nuclear forensics programmes. DNDO is a jointly staffed office established to improve the nation's capability to detect and report unauthorized attempts to import, possess, store, develop or transport nuclear or radiological material for use against the United States , and to further enhance this capability over time. To accomplish this mission, DNDO leads the development of the Global Nuclear Detection Architecture, the worldwide network of sensors, telecommunications and personnel, with the supporting information exchanges, programmes and protocols, that serve to detect, analyse and report on nuclear and radiological materials that are out of regulatory control. DNDO has worked with CBP to deploy radiation portal monitors and other radiation detection technologies to domestic seaports, land border crossings, mail facilities and pre-clearance air and rail ports of entry.

By mid-2013, the United States had deployed 1,463 of the approximately 1,500 radiation portal monitors it plans to deploy by December 2014, with 917 at land ports of entry, 453 at seaports and others at mail facilities, pre-clearance air and rail ports of entry. Currently, these systems scan 100 per cent of all containerized cargo on trucks and personal vehicles arriving in the United States through land ports of entry, as well as over 99 per cent of arriving sea containers. Additionally, DHS has procured thousands of personal radiation detectors, radiological isotope identification devices and backpack detectors for CBP, USCG, TSA and State and local law enforcement across the country to scan cars, trucks, conveyances and other items for the presence of radiological and nuclear materials. The NRC also has a Source Data Team to assist CBP in verifying the legitimacy of shipments of radioactive material entering (and exiting) the United States.

DNDO has also made radiological and nuclear detection training available to over 25,000 state and local officers and first responders. In 2013, for example, DNDO and USCG continued their efforts to enhance coordination with emergency responders and local law enforcement agencies to detect smuggled nuclear and radiological materials, including a March 2013 exercise in the waters close to New York, New York and Newark, New Jersey.

The United States makes a substantial effort to protect its borders from animal, plant and human pathogens. In cooperation with CBP, CDC and APHIS implement United States quarantine regulations on biological agents, infectious substances and vectors posing a threat.[68] Under the CDC Etiological Agent Import Permit Program, no person may import into the United States any infectious biological agent, infectious substance or vector unless accompanied by a permit issued by the CDC. Similarly, APHIS regulates the import and export of animals and animal products and prescribes quarantine and licensing regulations.[69] The APHIS plant protection and quarantine programme safeguards United States agriculture and natural resources from the introduction, establishment and spread of plant pests and noxious weeds. The APHIS Investigative and Enforcement Services enforces the quarantine regulations.

[68] See 42 CFR Part 71 and 9 CFR Parts 121-123.
[69] See 9 CFR Parts 101-123.

As an effective practice, the United States continually seeks ways to improve its quarantine activities. APHIS conducts much of this work, working as part of the CBP-led Joint Agency Task Force and with input from the Agriculture Quarantine Inspection Partnership Council, a Federal-State Government council responsible for providing advice, recommending direction and providing open communication on improvements. This work often prompts regulatory amendments. On 4 February 2013, for example, the CDC adopted new regulations to improve its ability to prevent the introduction, transmission or spread of communicable diseases into the United States, including revising definitions to better fit with international standards and programmes.[70]

In 2012, CBP deployed more than 2,360 agriculture specialists at approximately 167 United States ports of entry to enforce plant and animal controls. CBP also provides special canine teams for detecting dangerous agricultural imports. APHIS trains CBP in basic pest identification and operating procedures. Similar to the other efforts to create more time and distance to identify threats well before they get to United States territorial borders, APHIS has stations in and works with laboratories in other countries in addition to developing its own risk profiles for imports, exports and pest pathways.

United States officials presented other regulations, guidelines and approaches as effective border control practices and lessons learned to the Committee during the 2011 country visit. These included:

- Implementing the United States risk-management system and pushing out the borders in terms of time depended on automated systems to function effectively
- DNDO development of *Model Guidelines Document for Nuclear Detection Architectures*, which were produced under the auspices of the Global Initiative to Combat Nuclear Terrorism (GICNT) and became part of the IAEA *Nuclear Security Series* (No. 21)
- The FBI handbook, *Criminal and Epidemiological Investigation Handbook 2011 Edition*[71]

## Operative paragraph 3 (d) — export controls

**Establish, develop, review and maintain appropriate effective national export and trans-shipment controls over such items, including appropriate laws and regulations to control export, transit, trans-shipment and re-export and controls on providing funds and services related to such export and trans-shipment such as financing, and transporting that would contribute to proliferation, as well as establishing end-user controls; and establishing and enforcing appropriate criminal or civil penalties for violations of such export control laws and regulations**

In addition to providing authorities more time and distance in which to manage cargo entering the United States, CBP, ICE-HSI, and various regulatory and law

[70] See http://www.gpo.gov/fdsys/pkg/FR-2013-02-04/html/2013-02391.htm.

[71] http://www.fbi.gov/about-us/investigate/terrorism/wmd/criminal-and-epidemiological-investigation-handbook.

enforcement agencies apply significant resources to manage the risk associated with WMD related materials leaving the United States. The United States implements its resolution 1540 (2004) obligations to control the export, transit, trans-shipment and re-export of related materials through separate legal regimes for dual-use, defence and certain nuclear items. The legal framework for such controls includes, among other measures, the Atomic Energy Act, the Nonproliferation Act, the Arms Export Control Act, the Export Administration Act, the Trading with the Enemy Act, laws on the Illegal Export of War Materials and Sanctions for Nuclear Proliferation, the Plant Protection Act, the Virus Serum Toxin Act, the International Trafficking in Arms Regulations (ITAR), the Export Administration Regulations (EAR), regulations issued by the Department of Energy and the NRC, the International Animal Export Regulations and the International Animal Products Export Regulations.

Several Federal law enforcement agencies have export control enforcement authorities. Special Agents with ICE-HSI, the FBI and the BIS Office of Export Enforcement, for example, can use, consistent with their respective authorities, undercover operations, wiretaps and asset forfeiture actions. ICE-HSI and the FBI also conduct overseas investigations in coordination with their foreign law enforcement partners. Uniquely, ICE-HSI Special Agents can use border search authority to conduct warrantless searches at the border. The NRC also has export control investigation and enforcement capabilities for nuclear-related items under its jurisdiction.

As noted in earlier submissions, the primary authorities for United States export controls on dual-use items (i.e., commodities, technologies and software) flow from the Export Administration Act of 1979, as amended. Executive Order 13222 (2001) declared a national emergency with respect to the unusual and extraordinary threat to the national security, foreign policy and economy of the United States in light of the expiration of the Export Administration Act.[72] As Congress has not renewed the Act, the President has extended annually the emergency, most recently with the "Notice — Continuation of the National Emergency with Respect to Export Control Regulations" of 8 August 2013.[73] In addition, Executive Order 13094 (1998) and Executive Order 13382 (2005) amended Executive Order 12938, as noted earlier, to enhance United States abilities to combat WMD proliferation in ways that affect United States border and export controls.

BIS exercises these authorities through the EAR, pursuant to which it maintains lists of parties denied export privileges that it updates almost daily. The BIS licensing decisions most relevant to implementing resolution 1540 (2004) involve items controlled through United States participation in the Nuclear Suppliers Group (NSG), the Australia Group and the Missile Technology Control Regime (MTCR). In fiscal year 2012, BIS approved 4,467 license applications for the export or re-export of items controlled by the Australia Group and denied 10, while returning 308 without action. These approvals included 2,777 for chemical manufacturing items, the greatest number approved by BIS for a single commodity classification. For items controlled for nuclear non-proliferation reasons, BIS approved 2,277, rejected 11 and returned 119 without action. For missile items, BIS

[72] See 50 U.S.C. App. 2401 et seq.

[73] See 78 Fed. Reg. 49,107 (Aug. 12, 2013).

approved 1,064, rejected 11 and returned 51 without action. To the extent that some overlap exists between materials related to resolution 1540 (2004) and the items controlled through the Wassenaar Arrangement, BIS approved 4,939 applications, rejected 18 and returned 437 without action.

As evidenced by a nearly 93 per cent approval rate of these types of licenses and an outright rejection rate of less than 0.4 percent, the United States effectively exercises its obligations under paragraph 3 (d) of Security Council resolution 1540 (2004) through export licensing review, not export denial. Moreover, while United States companies exported $4.6 billion of licensed items (of which 2.9 percent were exported under a special comprehensive license) and $20.2 billion of items under a license exception, these amounts represent just 0.3 and 1.3 percent, respectively, of overall United States trade.

As noted in earlier submissions, BIS licensing decisions come at the end of a well-developed inter-agency process in accordance with Executive Order 12981. The process primarily involves the Departments of Commerce, Defense, Energy and State, although other agencies can contribute. For the more contentious license applications, Executive Order 12981 contains a dispute resolution procedure. Relatively few license applications — only 242 for fiscal year 2011 — even rise to the first dispute resolution level (the BIS-led Operating Committee), and just 26 required further escalation to the Assistant Secretary-level Advisory Committee on Export Policy for resolution.

At the same time, questions regularly arise over whether a particular item constitutes a dual-use item and falls under the licensing authority of BIS, or a defense item falling under the authority of the State Department Directorate of Defense Trade Controls (DDTC). To resolve this concern, exporters may request that DDTC make a decision on the commodity jurisdiction, with recommendations from BIS and Defense Department's Defense Technology Security Administration (DTSA). In fiscal year 2012, BIS provided recommendations to the State Department on 1,292 such requests.

DDTC licenses exports (and temporary imports) of defence articles and services under the United States Munitions List (USML). The State Department determines what commodities the USML covers, using recommendations from BIS and DTSA. In addition to technical support and security assessments from DTSA, State works closely with ICE-HSI, CBP and the Department of Justice on compliance and enforcement, and with the intelligence community to review allegations of diversion and unauthorized transfers. It also refers about 30 per cent of its applications to other offices, agencies and Departments (e.g., DoD) for comment and recommendations.[74] In contrast to the dual-use licensing regime, all United States persons that manufacture or export defence articles or services must register with the DDTC. The Department adjudicated over 86,000 license applications and other approval requests in fiscal year 2012, compared to 83,000 in 2011.

United States or foreign persons engaged in arms brokering also must register with the DDTC. On December 19 2011, the State Department proposed an "Amendment to the International Traffic in Arms Regulations: Registration and

[74] For additional information on the process, see "Getting Started with Defense Trade" at http://www.pmddtc.state.gov/documents/ddtc_getting_started.pdf.

Licensing of Brokers, Brokering Activities, and Related Provisions" that would clarify registration requirements, the scope of brokering activities, prior approval requirements and exemptions, procedures for obtaining prior approval and guidance and reporting and recordkeeping of such activities, and published an "interim final" rule — meaning the rule became effective on the date it was published — on 26 August 2013.

The NRC ensures that exports and imports of nuclear materials, facilities and equipment under the Agency's jurisdiction are licensed in accordance with applicable United States statutory and regulatory requirements. These exports and imports must also meet United States Government commitments under legally binding international treaties and multilateral and bilateral peaceful nuclear cooperation agreements, also known as Section 123 agreements. The commodities under NRC export licensing authority are nuclear reactors, uranium enrichment facilities, spent fuel reprocessing plants, uranium and plutonium conversion plants, heavy water or deuterium production plants, nuclear fuel fabrication plants, lithium isotope separation facilities, equipment, component parts, and assemblies that are especially designed or prepared for exclusive use in the aforementioned facilities, special nuclear material, source material, by-product material, deuterium and nuclear grade graphite for nuclear end-use. The NRC has import licensing authority for nuclear production and utilization facilities and special nuclear, source and by-product material.[75] The NRC also established specific licensing requirements for United States imports and exports of certain categories of radioactive sources to make NRC regulations consistent with the current version of the IAEA Code of Conduct on the Safety and Security of Radioactive Sources, as well as IAEA Guidance on the Import and Export of Radioactive Sources. In fiscal years 2011 and 2012, the NRC completed reviews for, and issued as appropriate, 139 and 110 import and export licenses, respectively.

The NRC also has a consultative role in reviewing proposed subsequent arrangements and 10 CFR Part 810 authorizations issued by DOE. In calendar year 2011, the NRC also participated in eight United States inter-agency bilateral physical protection visits to support nuclear export licensing. In 2012, the NRC participated in seven United States inter-agency bilateral physical protection visits, also in support of NRC export licensing.

In August 2009, President Obama directed agencies to undertake a comprehensive review of the United States munitions and dual-use export licensing systems. The goal of the review and its subsequent recommendations for reform, collectively known as the Export Control Reform (ECR) initiative, is to improve United States national security by focusing very strict controls, administered by the Department of State, on the most sensitive United States goods and technologies, while permitting less sensitive items to be exported under more flexible licensing mechanisms administered by the Department of Commerce. By doing so, the United States can focus its license review and enforcement resources more efficiently and effectively on exports according to their sensitivity and the risk of diversion to unauthorized end users and end uses. Since 2010, ECR actions have included revising the United States Munitions List (USML) into a "positive" list of items (similar to the Commerce Control List, which establishes controls based on objective performance parameters), thus providing greater clarity for exporters,

[75] See 10 CFR Part 110.8 and 110.9.

enforcement agents and prosecutors to determine the proper jurisdiction of an item, implementing an inter-agency mechanism to coordinate export enforcement activities, and working to put all export licensing and review agencies on a common software platform. In June 2011, the Department of Commerce published an ECR-related rule called the "Strategic Trade Authorization License Exception", which created a license exception authorizing the export, re-export and domestic transfer of specified items under specific circumstances to destinations that pose relatively low risk of diversion for purposes contrary to license requirements.[76]

During 2013, the Departments of State and Commerce published a number of ECR-related revisions to, respectively, the USML and the Commerce Control List (CCL):

- The publication on April 16, 2013 of the "Amendment to the International Traffic in Arms Regulations: Initial Implementation of Export Control Reform"[77] and the "Revisions to the Export Administration Regulations: Initial Implementation of Export Control Reform".[78] In the former, the Department of State amended the ITAR to revise four USML categories and provided policies and procedures regarding the licensing of items moving from the export jurisdiction of the Department of State to the Department of Commerce. In the latter, BIS added a structure and related provisions to the CCL to control munitions items that the President has determined no longer warrant export control on the USML. These changes will become effective on 15 October 2013

- On July 8, the publication of four more revised USML categories, the changes to which will become effective on 6 January 2014

Separate from ECR, BIS regularly amends the EAR to reflect changes in the guidance and control lists of the multilateral export control regimes. For example, in July 2012, BIS amended its regulations under "Wassenaar Arrangement 2011 Plenary Agreements Implementation: Commerce Control List, Definitions, New Participating State (Mexico) and Reports" and "Implementation of the Understandings Reached at the 2011 Australia Group (AG) Plenary Meeting and Other AG-Related Clarifications to the EAR". In addition, in 2007 BIS began comprehensive reviews of the CCL as part of a regular review cycle process, and amends the CCL accordingly. BIS also makes frequent amendments to the EAR to implement additions and deletions made to its Entity List (Supplement No. 4 to Part 744) and its Validated End-User List. In fiscal year 2012, for example, BIS amended the EAR five times to add to or remove persons from the Validated End-User List and nine times for changes to the Entity List, often to reflect the work of the BIS End-User Review Committee and the BIS Entity List Annual Review.

BIS also has amended the EAR and taken other actions to make its basic authorities and procedures clearer and more efficient. Examples include clarifying its authority to revise, suspend or revoke licenses and implementing a new online licensing process, the Simplified Network Application Processing System. In cooperation with the United States Census and CBP, BIS contributes to improvements in the Automated Export System (AES) — the mechanism for

[76] See 76 FR 35276.
[77] See 78 FR 22740.
[78] See 78 FR 22660.

electronically filing export and ocean manifest information directly to CBP — to increase exporter compliance with the EAR, such as making changes to the AES in fiscal year 2012 to prevent errors on exports involving a BIS license or items exported under the designation "No License Required".

Similarly, the State Department proposes and makes regular changes to the USML regarding exceptions, prohibitions or other matters pertaining to exports to particular countries, as well as amendments to its list of debarred parties and, in recent years, changes to accommodate the implementation of the United States Defense Trade Cooperation Treaties with the United Kingdom and with Australia.

Other notable enhancements in United States export controls stem from efforts to harmonize United States controls with international practices. For example:

- In "Implementation of the Understandings Reached at the 2012 Australia Group (AG) Plenary Meeting and the 2012 AG Intercessional Decisions: Changes to Select Agent Controls", effective June 5, 2013, BIS amended the EAR to combine the CCL entry that had covered the items on the Select Agent List on the AG control lists into a single CCL entry with those select agents that remain subject to the APHIS controls (as well as a recent addition to the list of select agents) to the AG-related CCL entries that control human and zoonotic pathogens and "toxins" and plant pathogens, respectively

- The "Export and Import of Nuclear Equipment and Material", published in May 2012, effective 8 June 2012, amended existing NRC regulations pertaining to the export and import of nuclear materials and equipment to reflect United States nuclear non-proliferation policy regarding United States obligations to the IAEA[79]

BIS provides a considerable amount of guidance to exporters on effective practices. In August 2011, for example, BIS issued its updated *"Best Practices" for Industry to Guard against Unlawful Diversion through Transshipment Trade*, which contains the Department of State's suggested 10 trans-shipment security best practices presented at the March 2011 Global Transshipment Conference, Dubai, United Arab Emirates.[80] The United States, as do several other Governments, views various forms of internal compliance programmes as good industry practice. To this end, the BIS provides guidance on developing an Export Management and Compliance Program (EMCP) for exporters and freight forwarders and in fiscal year 2012 reviewed 22 written corporate compliance programmes and held three seminars on how to develop an EMCP in various cities.[81] BIS also issues Special Comprehensive Licenses to qualified parties that allows multiple exports or re-exports of EAR items under a single license. BIS regularly holds on-site reviews and other audits of these license holders. BIS conducted on-site reviews of 26 "deemed" export licenses to confirm that the holders implemented the technology control plans and other license conditions specific to these license types. Finally, to implement the major new license exception Strategic Trade Authorization, BIS recently began an extensive new compliance programme to review exports under this exception. For defence exporters and service providers, the State Department

[79] 10 CFR Part 110.

[80] See http://www.bis.doc.gov/pdfpublications/best_practices.pdf.

[81] See the guidance documents at http://www.bis.doc.gov/complianceandenforcement/emcp.htm.

issues more than two dozen guidance, instruction and checklist documents to enhance compliance.[82]

To help implement United States end-user controls on WMD-related materials (a specific obligation under resolution 1540 (2004)), BIS completed 994 end-use checks in more than 50 countries in fiscal year 2012, including 136 pre-license checks conducted to prevent the release of sensitive items to unreliable parties, and 858 post-shipment verifications, which assist the United States Government in monitoring such transactions to conclusion. BIS Export Control Officers stationed at United States embassies and consulates in Moscow, Beijing, Hong Kong, New Delhi, Abu Dhabi and Singapore conducted more than half the total checks, covering 29 countries. Office of Export Enforcement Special Agents and analysts deployed from the United States and Foreign Commercial Service Officers and support personnel stationed at various United States embassies conducted the remainder. For items on the USML, the State Department has a parallel and complementary system, i.e., the Blue Lantern programme, which is historically supported globally through ICE-HSI's international footprint consisting of 74 offices in 48 countries noted elsewhere in this report. In fiscal year 2012, there were 820 Blue Lantern checks conducted in 103 countries, mostly in East Asia and Europe. In fiscal year 2011, Blue Lantern checks were conducted in 88 countries, the majority in East Asia and the Americas.

An important function of licensing officers involves their making formal determinations that controls apply to specific items intended for export. In the United States, BIS License Determinations (LDs) are used in enforcement actions connected with potential violations of the EAR. In fiscal year 2012, BIS completed 442 enforcement LDs in support of BIS enforcement actions. It also completed 194 LDs for the FBI and 548 LDs for CBP and 602 for ICE-HSI in support of their criminal investigations of potential unlawful exports.

In 2010, the United States strengthened its capacity to investigate and prosecute violations of the EAR. Although BIS Special Agents in the BIS Office of Export Enforcement had extensive enforcement responsibilities for many years under temporary authorities, they acquired permanent enforcement authorities through Section 305 of the Comprehensive Iran Sanctions, Accountability, and Divestment Act. BIS investigations in fiscal year 2012 resulted in the criminal conviction of 27 individuals and businesses for export violations, with $4.7 million in criminal fines, more than $5 million in forfeitures and more than 187 months of imprisonment. In addition, BIS issued 231 warning letters and made 199 detentions and 48 seizures of shipments. It issued Temporary Denial Orders for 16 companies and eight individuals, and 14 Denial Orders denying export privileges. Recent examples of specific prosecutions include:

- On March 29, 2013, a foreign national in New York was sentenced to nine months in prison for attempting to export carbon fibre, a dual-use item
- On May 22, 2012, a non-United States sales manager was arrested in Boston and charged with conspiracy to export dual-use items that can be used in gas centrifuges to enrich uranium to weapons-grade

[82] http://www.pmddtc.state.gov/licensing/guidelines_instructions.html.

- On September 9, 2011, a foreign national residing in the United States pleaded guilty to conspiring to commit export control violations and defraud the United States with a scheme to export nuclear-related materials

- On Oct. 20, 2010, a naturalized United States citizen was sentenced to 57 months in prison and three years supervised release for attempting to export RD-180 rocket propulsion systems, engines and technology, which appear on the USML and the MTCR Annex

ICE-HSI places particular significance in its enforcement efforts to prevent procurement networks, hostile nation States or terrorist groups from acquiring military products, sensitive dual-use items or restricted technology. Due to its customs and immigration authorities within DHS, ICE-HSI it is uniquely positioned to disrupt and dismantle illicit procurement and WMD proliferation networks. Since the inception of ICE-HSI in 2003, its counterproliferation investigations have resulted in the seizure of 5,436 items valued at over $308 million. Its presence in 48 countries establishes mutual bilateral cooperation in the counterproliferation arena and enlarges United States enforcement and compliance efforts worldwide through training, formal exchanges and liaison.

Using the whole-of-government approach, the United States has taken several new steps to augment and leverage its existing export control enforcement capabilities in recent years. In March 2012, the Export Enforcement Coordination Center (E2C2), managed and operated under ICE-HSI as set out in Executive Order 13558 (2010), began bringing together more than two dozen departments and agencies with export control enforcement responsibilities. E2C2 not only serves as a forum for coordination, but a mechanism for identifying and resolving investigative conflicts. The Center also coordinates provision of counterproliferation training to the export enforcement community. NNSA is one of the primary providers of such training. In another example of building new enforcement capabilities, in May 2012 BIS started hosting an inter-agency Information Triage Unit. The Unit assembles, analyses and disseminates information from all sources, including intelligence, on the bona fides of transaction parties in license applications.

For export controls, United States officials offered the Committee several effective practices in addition to those mentioned above, including:

- Export control legislation should include distinct purposes and objectives, clear jurisdictions of authority, clear jurisdictions for controlled items, transparency, rules on document retention, allowance for information sharing for enforcement, a mandate for enforcement and appropriate penalties for violations

- Having a formal dispute resolution process in an inter-agency export licensing system helps minimize the time required to process a license, which helps exporters yet allows relevant agencies to have meaningful input

- Involving industry as a partner furthers compliance and enforcement objectives, including by permitting voluntary self-disclosure of violations and other means of cooperation that mitigate factors in settling administrative cases

- Specialized export control training for border control officials, prosecutors and judges and other law enforcement officials, as well as for licensing officers significantly augments enforcement efforts[83]
- In enforcing export and border controls, electronic submissions of licenses and shipper's export declarations make it easier to track performance and evaluate risk metrics, as well as reduce response times for investigating, interdicting (or clearing) shipments
- Posting of law enforcement officers in embassies abroad enhances cooperation with other countries in issuing licenses and ensuring compliance, especially through end-user checks

## Operative paragraph 6 — control lists

**Recognizes the utility in implementing this resolution of effective national control lists and calls upon all Member States, when necessary, to pursue at the earliest opportunity the development of such lists**

As noted elsewhere in this report, the United States maintains a number of national control lists relevant to implementing Security Council resolution 1540 (2004). The CCL and the USML incorporate the control lists of the AG, the MTCR, the NSG and the Wassenaar Arrangement, as well as the items under the CWC and various Security Council sanctions resolutions. The Commerce, State and Treasury Departments maintain several end-user lists designed to help ensure that items do not go to proliferators, terrorists, criminals or other non-State actors for illicit purposes. Such end-user lists have special value in implementing catch-all controls in particular. Through its outreach and assistance programmes, the United States encourages other States and the private sector to make use of both item and end-user control lists. In addition to its lists of individuals, entities or organizations, the United States also maintains lists of countries for which the United States has embargoes, targeted sanctions or other prohibitions (particularly under the ITAR), such as those designated by the United States State Department as State sponsors of terrorism.

Beyond the items that appear in the CCL and USML lists, DHS developed a Chemicals of Interest (COI) list in its appendix to CFATS for chemicals that present one or more security issues.[84] The National Institute of Allergy and Infectious Disease (NIAID) also has a list of Category A, B, and C Priority Pathogens, which closely matches the CDC list of Category A, B and C Biological Diseases/Agents, and highlights specific pathogens identified as priorities for additional research efforts as part of the NIAID biodefense research agenda.[85] NIAID reviews the list periodically, in conjunction with DHS and other Federal agencies.

[83] For example, the Department of Energy has an online training programme known as "eCIT" for officers of CBP, ICE, FBI and Justice (as well as officials in 68 other countries), which has 120 training modules to help officials identify proliferation-related items, estimate the risks related to a particular shipment and otherwise understand how to enforce export controls.

[84] See http://www.dhs.gov/xlibrary/assets/chemsec_appendixa-chemicalofinterestlist.pdf.

[85] See http://www.niaid.nih.gov/topics/BiodefenseRelated/Biodefense/research/Pages/CatA.aspx.

## Operative paragraph 7 — assistance

**Recognizes that some States may require assistance in implementing the provisions of this resolution within their territories and invites States in a position to do so to offer assistance as appropriate in response to specific requests to the States lacking the legal and regulatory infrastructure, implementation experience, and/or resources for fulfilling the above provisions**

Multiple United States Government departments and agencies provide assistance that supports the implementation of the resolution through a wide range of programmes and activities. The United States Congressional Research Service analysed the budget requests of Departments of Defense, State, Energy, and Homeland Security funding requests for cooperative threat reduction programmes for fiscal year 2014, which may give the Committee a sense of the scale of United States assistance activities.[86] Examining the budget projections in the study for United States assistance programmes directly related to implementing Security Council resolution 1540 (2004) for these four Departments alone approaches $1.65 billion.

The United States coordinates its non-proliferation assistance programmes through several different inter-agency mechanisms. Although this report organizes the assistance programmes by department or agency, many of these programmes rely on the expertise and resources of multiple departments and agencies. The Departments of State, Energy and Defense, for example, coordinate their efforts to support the development of Nuclear Security Centers of Excellence in light of commitments made by several countries at the 2010 Nuclear Security Summit. As an effective practice, the United States continually aspires to improve and sustain such inter-agency collaboration in assistance activities.

As Chair of the Global Partnership Against the Spread of Weapons and Materials of Mass Destruction in 2012, the United States also enhanced efforts to link its inter-agency coordination of assistance activities with the efforts to increase international cooperation on non-proliferation assistance. The United States focused on the areas enunciated at the 2011 G8 Summit in Deauville, specifically, nuclear and radiological security, biosecurity, scientist engagement and facilitation of implementation of resolution 1540 (2004). Officials collaborated on responses to assistance needs and coordinated possible projects in these areas as well as expansion of membership to reflect global security threats. In an effort to provide a more integrated mechanism for funding and implementing programmes under this extended mandate, for the first time, the Global Partnership invited relevant international organizations to the working group meetings. During this time, the Global Partnership also adopted informal sub-working groups on biosecurity, membership expansion and outreach, centres of excellence, nuclear and radiological security and chemical security to foster collaboration on assistance in these areas.

[86] Mary Beth D. Nikitin and Amy F. Woolf, "The Evolution of Cooperative Threat Reduction: Issues for Congress", Congressional Research Service Report for Congress, 7-7500, R 43143, Washington, D.C.: Congressional Research Service, 8 July 2013.

Brief descriptions of the major United States non-proliferation assistance programmes appear below.[87]

*Department of Agriculture*

Agricultural organizations play a direct role in public health, especially efforts to mitigate veterinary diseases and ensure the healthfulness of agricultural practices and products. USDA has programmes in disease detection and surveillance, disease exclusion, animal disease information systems and emergency response, delivered through its Centers for Epidemiology and Animal Health, the National Surveillance Unit, the National Veterinary Services Laboratory and the National Animal Health Laboratory Network, among others. In 2011-2012, for example, its Agricultural Research Service had a cooperative project on diagnostic assays and vaccine control strategy for Rift Valley fever.

APHIS delivers the USDA assistance most directly relevant to implementation of Security Council resolution 1540 (2004). APHIS courses make it possible for foreign health and biosafety regulatory officials to come to the United States to see how United States officials use skills and processes aimed at disease control strategies, risk analysis and assessment and laboratory network support, enabling these countries to have stronger agricultural infrastructures and, potentially, a brighter future in international trade. These programmes fit with the goals of the Global Food Security Initiative, which aims to build countries' capacity to fight hunger and malnutrition, in line with linking resolution 1540 (2004) implementation with development goals as recommended in the 2009 comprehensive review by the Committee. The classes also help to guard against the introduction of pests and disease in the United States.[88] In July 2012 APHIS hosted a series of seven courses designed to teach foreign agricultural officials about animal and plant health safeguarding best practices in the United States and enhance their ability to develop science-based regulatory systems that effectively prevent the introduction and establishment of harmful pests and diseases.

*Department of Defense*

The Defense Threat Reduction Agency (DTRA) is the United States Department of Defense's official Combat Support Agency for countering weapons of mass destruction. DTRA civilian scientists, staff and military member are subject matter experts on all areas of WMD concerns and issues. DTRA addresses the entire spectrum of chemical, biological, radiological, nuclear and high-yield explosive threats with a 24 hour a day, 7 days a week global network which includes direct support to the international areas of responsibility of the United States Combatant Commands. DTRA programmes include basic science research and development, operational support to United States warfighters on the front line and an in-house WMD think tank that aims to anticipate and mitigate future threats long before they have a chance to harm the United States, allies and partner nations.

The United States Strategic Command Center for Combating Weapons of Mass Destruction (SCC-WMD) is co-located with DTRA headquarters and synchronizes efforts to combat WMD across the United States military's geographic commands,

[87] For a list of and additional information on all the United States programmes reported to the Global Partnership, see http://www.state.gov/t/isn/rls/other/183131.htm.

[88] See http://www.aphis.usda.gov/newsroom/2012/07/enhance_safeguarding.shtml.

leveraging people (skill sets) programmes and inter-agency relationships of DTRA at a global strategic level. DTRA and the SCC-WMD work with military services, other inter-agency elements of the United States Government and countries across the globe in areas of counterproliferation, non-proliferation and WMD reduction issues with one goal in mind: Making the World Safer. All of these activities support United States compliance with Security Council resolution 1540 (2004) and helps partner nations to develop capacity to deal with WMD concerns.

Since the creation of DTRA in October 1998 and SCC-WMD in August 2005, the Department of Defense and other Federal agencies have increasingly looked to both for support and advice. Both organizations' responsibilities span the full range of activities necessary to combat and respond to WMD proliferation and use. At home and abroad, DTRA and SCC-WMD deliver global mission success against a very real and growing threat.

Most of the DoD assistance activities related to fostering implementation of the resolution come under the Cooperative Threat Reduction (CTR) programmes managed by the DTRA. CTR contains a wide range of individual programmes, providing training and technical assistance on such related topics as counterproliferation awareness, proliferation pathways, border security and interdiction, transportation, WMD materials storage and destruction and nuclear smuggling. In 2012, the Global Nuclear Security Program absorbed the Nuclear Weapons Storage Security and Nuclear Weapons Transportation Security Programs that have focused on cooperation with the Russian Federation to enhance the security, safety and control of nuclear weapons in storage and during shipment. The Global Nuclear Security Program will consolidate all of the CTR nuclear security efforts into a single programme. As such, the programme will provide enhanced security by maintaining physical security system upgrades, increasing inventory management capacity, enhancing security training support, improving transport security, developing emergency response capacity and maintaining personnel reliability support for strategic and non-strategic (tactical) nuclear weapons and fissile materials. This programme also helps establish Nuclear Security Centers of Excellence with partner countries to enhance training capability, consistent with international best practices for nuclear security, material control and inventory management, and in collaboration with the Departments of Energy and State.

The DTRA Weapons of Mass Destruction Proliferation Prevention Program enhances the capability of partner countries to deter, detect, report, and interdict illicit trafficking of WMD and related materials across international borders. It provides assessments, equipment, infrastructure, logistics support and related training to enhance national and regional capabilities that prevent the proliferation of WMD, its components and related materials to terrorists, rogue States or organized crime groups. DTRA coordinates this programme with the DoD International Counterproliferation Program and other United States Government border security programmes, and furthers inter-agency collaborations that contribute to a holistic approach to export control, border security and law enforcement-related capacity-building efforts. The United States expanded this programme to include South-East Asian States in 2011 and Middle Eastern States in 2013.

The DTRA Threat Reduction Engagement Program supports relationship-building engagements, including recently increased programme support for engagement with civilian agencies and entities, important for building relationships

in key areas like countering biological threats and border security. To assist partner States in implementing Security Council resolution 1540 (2004), the United States has recently approved the expansion of its threat reduction activities to regions beyond its traditional focus on former Soviet states to address border security and threat reduction activities in the Middle East and maritime domain awareness capabilities for maritime surveillance in South-East Asia, providing the ability to detect illicit transfers of WMD materials and strategic delivery systems, among other efforts. At the same time, DTRA will continue supporting threat reduction work in former Soviet states. The Threat Reduction Engagement Program supports the following WMD-related activities: non-proliferation or counterproliferation symposiums or workshops; bilateral or regional counterproliferation threat reduction-related symposiums; high-level exchanges or planning activities; and table-top exercises.

The DTRA Cooperative Biological Engagement Program (CBEP) works with HHS, CDC and the NIH to counter threats of State and non-State actors acquiring biological materials and expertise that could be used to develop or deploy a biological weapon. The programme destroys or secures especially dangerous pathogens at their source and builds partner capacity to sustain a safe, secure disease surveillance system to detect, diagnose and report outbreaks and to work collaboratively with partner country scientists in engagements that support the ethical application of biotechnology to a better understanding of endemic especially dangerous pathogens and their control/prevention. In 2011, The CTR programme built secure reference laboratories for pathogen collection in Azerbaijan, Ukraine and Kazakhstan. Currently there are 42 secure laboratories that have received CBEP upgrades in Armenia, Georgia, Kazakhstan and Ukraine. DoD continues to support upgrades and training at these facilities through the CBEP. As noted in the 2012 report by the United States to the BWC on implementation of Article X, the CBEP will spend more than $2 billion between fiscal year 2010 and fiscal year 2017 on these activities, with $250 million on these efforts in fiscal year 2012 alone. The programme has collaborative projects with countries in Eurasia, South-East Asia, South and Central Asia, the Middle East and sub-Saharan Africa. Specific project areas that CBEP supports include:

- Biosurveillance — Strengthen the capacity for public health and veterinary health systems to detect, diagnose and report infectious disease outbreaks in accordance with the World Health Organization (WHO) International Health Regulations and the reporting guidelines of the World Organization for Animal Health and the Food and Agricultural Organization of the United Nations
- Biosafety and biosecurity — Increase biosafety and biosecurity by securing collections of especially dangerous pathogens into a minimal number of safe and secure facilities that support transparent practices and research. Provide technical consultations, risk assessments and training courses to build human capacity and internal expertise to create a sustainable culture of laboratory biorisk management
- Cooperative biological research — Enhance global health security and foster safe, secure and sustainable bioscience capacity through joint scientific collaborations designed to help prevent, detect and respond to biological threats. The research is focused on understanding and reducing biological risk

posed by especially dangerous pathogens and emerging infectious diseases relevant to global health security

All CBEP assistance focuses on long-term sustainability and capacity-building that creates human capital, infrastructure and culture in support of international non-proliferation agreements, such as the Biological and Toxin Weapons Convention and Security Council resolution 1540 (2004).

The DTRA Chemical Weapons Elimination Program helps other States destroy their chemical weapons. Since 2010, the United States has provided financial and technical assistance to the Russian Federation and Albania, and has assisted Libya in planning for the destruction of the chemical weapons previously hidden by the Qadhafi regime through the Program.[89] Overall, the United States has given more than $1 billion in assistance over several years for the elimination of chemical weapons stockpiles in other States.

The Regional Security Engagement Program, in collaboration with the Combatant Commands and DoD-sponsored regional centres, builds partner country capacity through seminars and workshops on combating WMD. The seminars and workshops aim to teach partner nations best practices in the WMD arena and generate an open and frank discussion between nations to identify their perspectives concerning the challenges to combating WMD in their respective regions.

The DTRA International Counterproliferation Program collaborates with the FBI and DHS to provide training and equipment to develop institutions in partner countries to deter, detect and investigate crimes involving WMD-related materials and respond to illicit trafficking of such materials. The programme has provided a range of training to partner nations in the former Soviet Union, Eastern Europe, the Balkans, South-East Asia and Africa.

The Armed Forces Health Surveillance Center (AFHSC) has several relevant assistance activities. Its Global Emerging Infections Surveillance and Response System (GEIS) Division contributes to the protection of the global community through an integrated worldwide emerging infectious disease surveillance system. The AFHSC conducts the majority of these activities through DoD laboratories in Cambodia, Egypt, Georgia, Kenya, Peru and Thailand in partnership with the local ministries of agriculture, defence and health, as well as United States Army, Navy and Air Force reference laboratories in the United States. The work with all host country partners aims to improve diagnostic and reporting capacity in accordance with International Health Regulations core capacities. GEIS also partners directly with the DoD Geographic Combatant Commands to provide a workshops and exercises to facilitate technical exchanges between regional ministries of agriculture, defence and health, along with subject matter experts from around the world. These engagements strengthen United States military-to-military relationships and promote military support to civilian authorities. In 2012, GEIS partnered with 62 countries.

Established in 2012, the AFHSC Division of Integrated Biosurveillance supports DoD operational biosurveillance. With projects throughout the world and an annual budget in excess of $50 million, it supports many public health and surveillance activities. It has emphasized the standardization of laboratory and

[89] See http://www.state.gov/t/us/207257.htm.

reporting methods, expanded military-to-military engagements and fusion of DoD surveillance activities into those of the hosting nations, thus enhancing inherent in-country public health capacity.

*Department of Energy*

Since 2009, the NNSA Global Threat Reduction Initiative (GTRI) has assisted in the successful conversion to LEU fuel or verified the shutdown of HEU research reactors in 13 other countries as well as in the United States , and verified the cessation of the use of HEU targets for isotope production in Indonesia. It also has accelerated the establishment of a reliable supply of the medical isotope molybdenum-99 (Mo-99) produced without HEU by establishing partnerships with Belgium, the Netherlands and South Africa to convert Mo-99 production from HEU targets to LEU targets, and with four domestic commercial entities to produce Mo-99 in the United States with non-HEU technologies. During this period, it has helped remove all weapons-usable nuclear material from 11 countries and areas, frequently in close cooperation with the Russian Federation, including Romania (June 2009), Taiwan (September 2009), Libya (December 2009), Turkey (January 2010), Chile (March 2010), Serbia (December 2010), Mexico (March 2012), Ukraine (March 2012), Austria (December 2012), the Czech Republic (April 2013) and most recently Viet Nam (July 2013). In the latter case, for example, the United States worked closely with the Russian Federation to remove 11 kilograms of HEU from the Dalat Nuclear Research Institute in Dalat, Viet Nam. The United States will seek to remove such material from an additional country by the end of 2013. GTRI has now removed and/or disposed of more than 5,000 kilograms of vulnerable HEU and plutonium. GTRI also has secured more than 1,500 buildings containing dangerous, high-activity radiological sources and recovered more than 33,000 disused and unwanted radiological sources, preventing terrorists from acquiring the materials necessary to detonate a dirty-bomb.

The NNSA International Nonproliferation Export Control Program (INECP) helps partners with training on proliferation risk analysis in the licensing process, government outreach and industry compliance, and WMD-related commodity identification training (CIT) and technical "reach-back" for national customs and export enforcement organizations. CIT focuses primarily on appearance and other readily identifiable criteria such as special markings, notable features, packaging characteristics, typical values and container types, sizes, and weights to help Customs and other border agencies identify goods potentially subject to controls. The programme also maintains an online repository of CIT commodity information accessed through the Strategic Commodity Reference web application, which provides secure, searchable CIT information and relevant export control lists available to CIT-trained personnel in INECP partner countries, along with a stand-alone systems for South Africa, Sweden, Ukraine and the United Arab Emirates. INECP has begun to develop Smartphone applications, as well as to offer various guides, handbooks and other resources, including materials translated into Georgian, Latvian Russian and Ukrainian.

INECP has developed cooperative projects with international organizations under its CIT programme. For example, the programme works with the United Nations Office on Drugs and Crime (UNODC) on Advanced Interdiction Training, an adaptation of WMD-Commodity Identification Training, and CBRNe-Commodity Identification Training. UNODC operates interdiction teams through its

Container Control Program in approximately 42 areas and countries to date. Where partner countries overlap, UNODC and INECP conduct joint trainings on the use of their cargo identification software and on strategic commodities. UNODC and INECP share the costs of activities along with partner countries to optimize overall sustainability.

The NNSA International Nuclear Safeguards and Engagement Program works with countries in Africa, Europe, the former Soviet Union, the Middle East, South America, East Asia and South-East Asia to help strengthen their nuclear safeguards infrastructure and implementation of IAEA nuclear safeguards obligations. Activities include workshops, training seminars, equipment transfers, new safeguards technology testing and implementation and joint outreach. Engagement topics include Model Additional Protocol implementation, State Systems of Accounting for and Control of nuclear material, safeguards regulations, non-destructive and destructive assay, quality assurance and quality control and information management systems and processes.

The NNSA International Nuclear Security Program leads United States inter-agency physical protection assessment visits to ensure that United States nuclear material exported to foreign countries is secure. Through capacity-building engagement, the INS programme also helps strengthen the capabilities of partner countries to perform effective nuclear security functions sustainably. This engagement focuses on both process development and training at the national and site level.

The Material Protection Control and Accounting Program works with the Russian Federation and other States of the former Soviet Union to secure and reduce potentially vulnerable nuclear weapons and nuclear weapons-usable material. The United States and the Russian Federation recently signed a successor agreement to the expired Cooperative Threat Reduction Agreement to cooperate on nuclear security. The programme also works with China and India through best practices technical exchanges and through support for nuclear security Centers of Excellence, which will serve as training centres, promoting nuclear security best practices both domestically and regionally. As with several other programmes, the United States cooperates with other financial contributors in implementing these projects.

The Second Line of Defense (SLD) programme strengthens the capacity of partner countries to deter, detect and interdict illicit trafficking in nuclear and other radioactive materials across international borders, including through the global maritime shipping system. SLD projects involve partners in the Americas, the former Soviet Union, Eastern and Western Europe, the Middle East and North Africa, sub-Saharan Africa and East, South, and South-East Asia. As with many of its assistance programmes, the United States encourages partnership on funding and other contributions to the programme. On 23 July 2013, for example, the SLD announced that in collaboration with the New Zealand Ministry of Foreign Affairs and Trade, it would provide mobile radiation detection equipment to countries in Latin America, South-East Asia and Africa. This will be the fifth United States-New Zealand bilateral project under a bilateral memorandum of understanding that resulted from cooperation in the Global Partnership and its Nuclear and Radiological Security Sub-Working Group.

SLD provides fixed and mobile radiation detection capability, including equipment, training and sustainability support, to foreign border security and law

enforcement officials for use at international airports, border crossings, feeder seaports and large container seaports. SLD has already equipped over 500 sites including 45 major container seaports in over 50 countries, and plans to equip approximately 90 more sites and ports in fiscal years 2014-2018. SLD is also initiating a technical exchange programme whereby it offers guides, templates, lessons learned and advisory support to countries that are able to fund their own deployment activities.

The Global Security Through Scientific Partnerships (GSSP) programme was authorized by the United States Congress in fiscal year 2013 to carry out a programme on scientific engagement in selected countries to advance global non-proliferation and nuclear security efforts. The programme is designed to mitigate the risk of expertise proliferation and strengthen scientific best practices in knowledge security through outreach, training and science and technology collaboration. Under GSSP, scientists, technical personnel, site managers and government officials receive training to identify and prevent expertise proliferation, while working collaboratively within multilateral or bilateral science and technology frameworks to address national, regional, and global security challenges.

*Department of Homeland Security*

CBP assists other jurisdictions in improving their WMD transport and trans-shipment vulnerabilities in two ways under its Customs — Trade Partnership Against Terrorism (C-TPAT) programme and through its mutual recognition projects with Singapore, Israel, China, Mexico and Switzerland. CBP also has technical assistance projects with Colombia, Costa Rica, the Dominican Republic, Ghana, Guatemala, India, Kenya, Malaysia, Peru, the Philippines and Viet Nam.

Through two other overarching DHS initiatives, the Container Security Initiative (CSI) and the Secure Freight Initiative (SFI), CBP has forged strong, synergistic ties with NNSA that increase the likelihood that nuclear material or a nuclear weapon would be identified and interdicted during shipping. This relationship improves the ability of CSI inspection teams to identify high-risk containers bound for the United States. The NNSA Megaports Initiative, for example, has committed to providing a radiation detection capability to all CSI ports. Similarly, CBP partnered with NNSA in implementing the SFI. Through the Megaports Initiative, NNSA provided radiation portal monitors with optical character recognition technology, communications systems and integrated radiation portal monitor/imaging data for CBP and host nation personnel at SFI pilot ports, with completed installations at one SFI port.

CBP also cooperates closely with other customs and border control administrations through its participation in the State Department's Export Control and Related Border Security (EXBS) programme (see below). CBP offers, among other things, International Seaport Interdiction Training, International Air Cargo Interdiction Training and Regional Border Interdiction Training, Smuggler Interdiction and Interviewing Techniques, Green Border Tracking Training and a host of additional training activities.

ICE-HSI conducts liaison and foreign based training to Customs and national police counterparts to build investigative partnerships and expand counterproliferation initiatives. In 2012 and so far in 2013, ICE-HSI has conducted 35 international training events in 26 different countries. These training events

covered export controls, diversion, money laundering and many other topics. In October 2013, ICE-HSI will deploy a team to assist its Pakistan office in mentoring and training customs and police counterparts to identify, analyse, track and investigate the illicit diversion of precursor chemicals, particularly potassium chlorate, for use in IEDs.

*Department of Health and Human Services*

The National Biosafety and Biocontainment Training Program (NBBTP) addresses the unprecedented demand for consistent, reliable and effective staff training delivered by highly qualified individuals through sources that are both nationally and internationally recognized, stemming from the increase in the number of high (biosafety level-3) and maximum containment (biosafety level-4) laboratories in the United States and abroad. The programme trains employees in the unique set of requirements necessary for safety and security for work in biosafety level-3 and biosafety level-4 laboratories. It also helps participants develop policies, guidelines and regulations with regard to high and maximum containment laboratories that reflects a thorough understanding of their respective environments and specific requirements of the associated workforce. NBBTP works in partnership with the Division of Occupational Health and Safety and the National Institute of Allergy and Infectious Diseases (NIAID) at NIH to provide:

- Professional Certificate Programs for Biosafety and Biocontainment (B&B) professionals as well as for Operations and Maintenance (O&M) personnel working in high containment facilities
- Professional Development Courses (on the two tracks: B&B and O&M; distance learning and onsite)
- NBBTP Fellowships (post baccalaureate and post-doctoral) of two-year professional training in biosafety and biocontainment that immerses Fellows in biosafety and biosecurity coursework, applied research and experiential learning assignments

The Global Disease Detection (GDD) programme strengthens global capacity to rapidly detect, accurately identify and promptly contain emerging infectious disease and bioterrorist threats that occur internationally. GDD promotes scientific discovery through partnership with host countries, conducted in alignment with article 44 of the IHR, which directs States parties to collaborate with each other to detect, assess and respond to events and to develop, strengthen and maintain public health capacities. GDD core capacities include training in field epidemiology and laboratory methods; surveillance and response for emerging infectious disease threats; assistance with pandemic influenza preparedness; promotion of zoonotic disease investigations and control efforts; risk communications and emergency preparedness; and laboratory biosafety and improved laboratory systems.

The GDD seeks to have regional centres in all WHO regions, with GDD regional centres established in China, Egypt, Guatemala, Kenya, India, South Africa and Thailand, and with three more centres in development in Bangladesh, Georgia and Kazakhstan. Since 2006, at the request of host nations, GDD centres have assisted in responding to over 900 outbreaks. GDD regional centres also function as members of the Global Outbreak Alert Response Network (GOARN) during emergencies.

The WHO and other international partners recognize the GDD Operations Center, located in the CDC Emergency Operations Center, as an innovative epidemic intelligence and response unit and a leading resource for successful protocols to track and identify "mysterious illnesses", where disease etiology is unknown at the onset of the event. Subject matter experts in infectious disease, veterinary medicine, medical microbiology, epidemiology, information technology and emergency coordination help detect and confirm international disease events and threats, provide operational support for rapid deployment of CDC assets and field teams, ensure United States compliance with the International Health Regulations and perform liaison with GOARN.

Since July 2007, the GDD Operations Center has identified over 1,000 events in its database, along with 3,350 updates to these incidents. This historic database allows analysts to track outbreaks over time and rapidly recall outbreak sequence and chronology. Since 2006, the GDD Operations Center has responded to over 80 requests for assistance in over 50 countries, including outbreaks of anthrax, avian influenza, botulism, cholera, dengue, Ebola, Marburg, monkey pox, polio and Rift Valley fever, among others.

The CDC Field Epidemiology Training Programs (FETP) help countries build sustainable capacity for detecting and responding to health threats and develop expertise so disease outbreaks can be detected locally and prevented from spreading. Though FETP, CDC works with foreign ministries of health to establish applied (or field) epidemiology training programmes modelled after those of the CDC Epidemic Intelligence Service. FETPs provide actionable information so public health workers use science and data to detect and monitor disease outbreaks and determine public health policy and programming. As part of their mission to strengthen public health systems globally, FETPs also assist countries to meet their core capacity requirements for surveillance and response under the revised International Health Regulations. The FETP, a two-year full-time training and service programme, focuses on giving practical experience to ministry of health employees with medical or scientific training on epidemiology, disease surveillance, outbreak investigation and biostatistics as well as conducting epidemiologic investigations and field surveys, designing and evaluating surveillance systems, collecting and analysing data using appropriate statistical tools and methods, reporting findings and making recommendations to policymakers, and training other health workers. CDC regularly collaborates with national and international organizations and private foundations to establish and maintain FETPs. CDC has helped develop 46 FETPs serving 64 countries, graduating over 2,600 epidemiologists, including 24 current programmes covering 40 countries. During the last three years, CDC-supported FETPs responded to over 700 outbreaks and conducted 448 planned studies and 845 surveillance assessments.

Although not assistance on biosecurity itself, HHS incorporates biosecurity issues into some of its grant projects beyond what is expected of United States Government agencies under the DURC policy. Under the NIAID Foreign Laboratory Research Grant Program, for example, NIH conducts a biosafety and security evaluation of non-United States laboratories receiving NIH research grants for research that uses biological agents that have the potential for use as biological weapons.

The CDC also contributes to WHO through the assignment of CDC staff to overseas facilities within the WHO structure, with special attention to the WHO regional offices (e.g. PAHO, Regional Office for Africa) and through grants to support specific programmes of global importance, including surveillance for emerging diseases. In addition, WHO bases a number of its collaborative centres within CDC, sharing staff, research initiatives and publications for use by the global health community. The CDC Office of Safety, Health, and Environment, for example, serves as the WHO Centre for Applied Biosafety Programmes and Training. The CDC also contributes to the WHO Regional Office for Africa integrated disease surveillance and response programme. Through technical assistance and development of guidelines and tools, the CDC works closely with WHO and African ministries of health towards developing strategies, approaches and materials for designing, implementing, monitoring and evaluating comprehensive disease surveillance systems.

*Department of Justice*

On general matters of enforcement and prosecution, the Office of Overseas Prosecutorial Development, Assistance and Training (ODPAT) and the International Criminal Investigative Training Assistance Program integrate their work with other Federal law enforcement agencies to develop all three basic pillars of criminal justice systems: prosecutors/criminal justice reform, police and corrections. To this end, the DOJ has Resident Legal Advisors in over 35 countries, providing full-time advice and technical assistance to host Governments in establishing fair and transparent justice sector institutions and practices. Similarly, OPDAT works closely with the Department of Justice National Security Division and the Bureau of Counter Terrorism in the State Department in building capacity for effective criminal justice sectors. Representative Resident Legal Advisor deployments include Bangladesh, Kenya, Malaysia, Pakistan, Turkey and the United Arab Emirates. OPDAT additionally supports counter-terrorism programmes throughout the world, including efforts in West Africa, South-East Asia, Latin America and the Middle East.

More pointedly for implementation of Security Council resolution 1540 (2004), since 2007 OPDAT has organized United States assistance work addressing the prosecution of proliferation, export control and border control crimes. Through improved understanding of the prosecutorial and investigative needs of these types of prosecutions, these programmes aim to enhance compliance with the resolution. They also advance the United States non-proliferation agenda by developing a prosecutorial capacity among partner states and familiarizing prosecutors and judges with the challenges associated with enforcing strategic trade control laws and best practices for dealing with them. OPDAT has conducted EXBS exchanges in such countries as Argentina, the Czech Republic, Kazakhstan, Latvia, Malaysia, Taiwan, Thailand, Singapore, the Ukraine and the United Arab Emirates.

*Department of State*

Directed by the State Department Bureau of International Security, Office of Export Control Cooperation (ECC), the Export Control and Related Border Security (EXBS) programme serves as the primary United States mechanism to provide assistance to countries to improve their export control systems, an effort fully

consistent with the objectives of Security Council resolution 1540 (2004).[90] The EXBS programme operates in more than 60 countries worldwide and provides hundreds of training sessions each year. The programme has donated more than $650 million worth of equipment, training and other assistance to date to foreign partner nations. The programme seeks to prevent the proliferation of WMD and their means of delivery, as well as destabilizing accumulations of advanced conventional weapons, by helping to build effective national export control systems in countries that possess, produce, or supply strategic items, as well as in countries through which such items are most likely to transit. In 2013, the EXBS programme had $55 million in funding for its assistance activities.

EXBS engages on bilateral, regional and multilateral levels with foreign Governments to aid in the establishment of independent capabilities to regulate transfers of WMD-related items and related dual-use items and to detect, interdict, investigate and prosecute illicit transfers of such items. In developing and improving these capabilities, EXBS works to ensure conformity with international standards for regulating trade in items on the control lists of the multilateral export control regimes, to prevent the authorization of transfers to end uses and end users of proliferation concern, and to detect and interdict illicit transfers at the border.

The EXBS programme partners with other international organizations and nations to identify regulatory and institutional gaps and to develop resource requirements. The EXBS programme provides a wide range of technical assistance, from executive exchanges to training workshops to the provision of detection equipment and specialized training for border control and enforcement agencies. It sponsors regular international export control conferences and global trans-shipment conferences, many with events specifically focused on resolution 1540 (2004) implementation. For example EXBS co-sponsored the thirteenth International Export Control Conference with the European Union and the Government of Slovenia in Portorož, Slovenia, from 7 to 9 May 2012. The conference was co-hosted by the United States and the European Union for the third consecutive year. The conference was attended by 253 representatives from 79 countries, as well as international and non-governmental organizations, academia and industry. Presenters discussed best practices for successful partnerships in licensing, enforcement and industry, while breakout exercises demonstrated how partnerships enhance the effectiveness of strategic trade controls.[91]

EXBS collaborates within the United States inter-agency community and with international and regional organizations. EXBS works with other export control assistance providers such as the European Union, Japan and Australia, as well as with related United States government programmes such as the Defense Department's International Counterproliferation Program, the Anti-Terrorism Assistance and International Narcotics Control and Law Enforcement programmes in the Department of State, and the Second Line of Defense programme of the Department of Energy. EXBS also partners with countries to share information and exchange best practices and technical expertise.

[90] For the most up-to-date information on ECC and the EXBS programme, see www.state.gov/strategictrade.

[91] For the most up-to-date information on ECC-sponsored conferences, please visit www.exportcontrol.org.

The EXBS programme has 23 full-time programme advisers serving "in-country" as the primary embassy point of contact on export control and border security policy and cooperation, which EXBS views as a particularly effective practice in facilitating the delivery of assistance. The advisers provide consistent, face-to-face interaction, meetings and training with host-nation counterparts. The advisers works with each recipient country's government agencies, international donors, non-governmental organizations and United States Government agencies — principally the NNSA — to plan, coordinate and deliver training, equipment and services with the goal of strengthening a country's non-proliferation policies, export control system and border security capabilities. The adviser verifies that EXBS equipment is deployed, operational and used for intended purposes, and submits reports on the status of the recipient Government's non-proliferation policies, export control system and border control capabilities resulting from EXBS and related United States Government assistance.

The United States established the Preventing Nuclear Smuggling Program (PNSP) to strengthen capabilities to prevent, detect and respond to incidents of nuclear smuggling in countries where significant nuclear smuggling events have occurred or are judged to be likely. PNSP is coordinated by the Office of Weapons of Mass Destruction Terrorism. PNSP works with partner Government to reach a common understanding of current counter nuclear smuggling capabilities; ongoing cooperation with United States and other international programmes to improve those capabilities; and gaps in capabilities that need to be further addressed. Based on the results of this joint review, the United States negotiates a bilateral Counter Nuclear Smuggling Joint Action Plan with the partner Government specifying in detail agreed, priority steps to improve the anti-nuclear smuggling capabilities. PNSP then works with the international donor community to identify specific interests and assets which could be applied to a selection of cooperative projects that align with the interests and resources of the donors. PNSP facilitates donor contributions and integrates them with relevant, ongoing activities.

To date, PNSP has facilitated Counter Nuclear Smuggling Joint Action Plans and developed anti-nuclear smuggling cooperative projects with Armenia, the Democratic Republic of the Congo, Georgia, Kazakhstan, Kyrgyzstan, the Republic of Moldova, Tajikistan, Slovakia, Ukraine, Uzbekistan and most recently with Lithuania in April 2013. It has engaged and plans to engage with additional prospective partners to complete new Joint Action Plans. PNSP has developed donor partnerships with 12 countries and three international organizations, and intends to create more such partnerships over the coming years. In support of the Joint Action Plans projects, PNSP implements workshops, trainings and activities focused on building counter nuclear smuggling capabilities, including in the areas of integrated response procedures, investigations, prosecutions and nuclear forensics.

The Biosecurity Engagement Program (BEP) seeks to engage biological scientists and combat biological threats worldwide by providing assistance to improve biosecurity and biosafety, conducting cooperative research and improving infectious disease detection and control. BEP programmes are aligned with President Obama's National Strategy for Countering Biological Threats and support compliance with the Biological Weapons Convention, Security Council resolution 1540 (2004) and the International Health Regulations (IHR). Biorisk reduction is achieved through improving laboratory biosafety and biosecurity programmes, improving a country or region's ability to detect and control disease outbreaks and

actively engaging biological scientists. While working towards these objectives, BEP supports the legitimate use of biological materials and equipment necessary to combat infectious disease and enhance public and animal health worldwide.

BEP leverages technical resources and experts from numerous United States agencies, universities, international organizations, nongovernmental organizations and national academies of sciences to meet its core objectives. In addition to inter-agency and organizational collaborations, BEP works closely with host-country Governments, United States embassies and other nations to identify needs and implement assistance necessary to ensure safe, secure and sustainable bioscience capacity while achieving the larger goal of reducing global biological risks. BEP efforts are designed to prevent, detect and respond to both existing and emerging global biological threats. Specifically, BEP provides assistance across the following areas:

- Biosafety/biosecurity — Improve laboratory biosafety and biosecurity through technical consultations, risk assessments, and training courses; build the human capacity and internal expertise to create a sustainable culture of laboratory biorisk management

- Disease detection and control — Strengthen the capacity for public health and veterinary health systems to detect, report, and control infectious disease outbreaks;

- Cooperative research and development — Enhance global health security and foster safe, secure, and sustainable bioscience capacity through joint scientific collaborations designed to help prevent and detect biological threats

In its 2012 Report on Implementation of article X to the BWC, the United States disclosed that the United States State Department provided in excess of $35 million in fiscal year 2011 funding for programmes on laboratory biorisk management, disease detection and control and cooperative research and development in partnership with countries in Eurasia, South-East Asia, South Asia, the Middle East and North Africa, sub-Saharan Africa and Latin America.

Since 2011, the United States also has contributed $4.5 million to the United Nations Trust Fund for Global and Regional Disarmament Activities for projects that specifically support the work of the Committee. The Coordinator for United States implementation of Security Council resolution 1540 (2004) in the Office of Counterproliferation Initiatives works closely with the United Nations Office for Disarmament Affairs, the administrator of the Trust Fund, to focus on projects that help States identify gaps in implementation and assistance needs that other assistance programmes might not address.

*United States Agency for International Development (USAID)*

USAID manages a number of programmes related to preventing, preparing against and responding to pandemics and other health hazards with dozens of countries in Africa, the Americas, Asia and Europe. This includes support for the ASEAN-United States Technical Assistance and Training Facility in cooperation with ASEAN national health associations and the Chernobyl Shelter Implementation Plan.

*United States Nuclear Regulatory Commission*

NRC has almost 40 years of experience with oversight of the civilian uses of nuclear and radioactive materials. This includes nuclear power and research reactors, nuclear fuel cycle and uranium recovery facilities and radioactive sources. NRC has been actively engaged with our international regulatory counterparts since its establishment in 1975.

Exchange of operational experience, for example, is a key international activity conducted by NRC. The information and insight gained is frequently directly applied in direct support of its regulatory mission. There are, as of January 2013, over 430 commercial nuclear power plants operating around the world. Roughly 100 of these are operated in the United States. Of the 330 or so nuclear power plants operating outside of the United States, 60 per cent to 65 per cent are based on or are derived from United States technology, or are dependent on supplies of United States-origin fuel, equipment, maintenance, technical expertise and other support services.

The NRC also supports efforts by counterparts to strengthen their regulatory programmes. Specific areas in which NRC engages include:

- Nuclear power — The International Regulatory Development Partnership (IDRP) assists countries with new or expanding nuclear power programmes in establishing and maintaining an effective nuclear safety and security regulatory authority. The IRDP provides technical assistance to develop organizational infrastructure and programmatic resources for licensing and oversight of nuclear power reactors
- Source security (to which resolution 1540 (2004) specifically refers) — The NRC also continues to expand outreach and assistance activities as part of the Radiological Source Regulatory Partnership programme. The objective of this programme is to assess and support the specific needs of national regulators to promote adherence to the IAEA Code of Conduct on the Safety and Sources of Radioactive Sources
- Uranium recovery — Through uranium recovery workshops, NRC provides information to countries initiating or restarting uranium recovery programmes. Topics include best practices in licensing, inspection and decommissioning with the goal of preventing future legacy sites

## Operative paragraph 8 (a) — treaty promotion

**To promote the universal adoption and full implementation, and, where necessary, strengthening of multilateral treaties to which they are parties, whose aim is to prevent the proliferation of nuclear, biological or chemical weapons**

In the past two years the United States has been proactive in promoting the adoption and implementation of non-proliferation-related multilateral treaties by other States. In 2013, for example, the United States approached a number of Governments in Africa and Asia to encourage the adoption of the Chemical Weapons Convention. During 2012 and 2013, the United States also formally approached numerous countries in Africa, Asia and the Americas encouraging them to subscribe to the Hague Code of Conduct Against Ballistic Missile Proliferation.

The United States vigorously supports the Hague Code of Conduct, which is aimed at bolstering efforts to curb ballistic missile proliferation worldwide and to further delegitimize such proliferation. The United States has also aggressively sought to prevent withdrawal from the NPT over the past two years by approaching many countries in all regions of the globe.

In an effort to strengthen the international nuclear security regime, the United States hosted the 2010 Nuclear Security Summit. The summit highlighted the global threat posed by nuclear terrorism and the need to work together to secure nuclear material and prevent illicit nuclear material trafficking and nuclear terrorism in support of Security Council resolution 1540 (2004). The leaders of 47 nations renewed their commitment to ensure that nuclear materials under their control are not stolen or diverted for use by terrorists, and pledged to continue to evaluate the threat and improve the security as changing conditions may require, and to exchange best practices and practical solutions for doing so. The summit reinforced the principle that all states are responsible for ensuring the best security of their materials, for seeking assistance if necessary, and providing assistance if asked. The summit's communiqué called for cooperation through the United Nations to implement and assist others in connection with Security Council resolution 1540 (2004). In 2012, leaders gathered in Seoul, Republic of Korea to take stock of the post-Washington work and set new goals for nuclear security. The 2012 summit in Seoul was the largest international summit to date in the security field that discusses international cooperative measures to protect nuclear materials and facilities from terrorist groups. More than 53 heads of state and international organizations attended. The 2014 summit will be held in The Hague, Netherlands, and the United States recently announced its intentions to host the summit in 2016.

The United States has used its membership in intergovernmental organizations to promote implementation of multilateral treaties designed to prevent proliferation. As a member of the G8 Nonproliferation Directors Group, for example, the United States supported and participated in annual demarches including delivering a demarche in 2011 to all United Nations Member States that had not yet filed the initial report called for by Security Council resolution 1540 (2004). In 2013, the United States joined another demarche calling on all States to file the required report. During the past two years the United States has also made numerous demarches — unilaterally and on behalf of the G8 Nonproliferation Directors Group — encouraging implementation of the IAEA Additional Protocol. In 2011, demarches were made to Governments in Asia, the Caribbean and the Pacific Islands urging them to complete the process for adopting the Additional Protocol, and offering assistance if needed. Similar approaches were again made in 2012 to countries in Asia and Africa.

In 2012, during the United States Chairmanship of the G8 Global Partnership Against the Spread of Weapons and Materials of Mass Destruction, the United States made implementation of Security Council resolution 1540 (2004) — specifically matters related to assistance — a standing agenda item for all Global Partnership meetings. Engaging closely with Global Partnership members, the resolution 1540 (2004) Committee and its experts and intergovernmental organizations, the Global Partnership under United States leadership made substantial progress in identifying available assistance providers and programmes to contribute to global implementation of resolution 1540 (2004). Numerous organizations, including but not limited to the IAEA, Interpol, the World Customs

Organization, the OPCW, the European Union and others are now listed as assistance providers on the Committee website.[92]

## Operative paragraph 8 (b) — promoting treaty implementation

***To adopt national rules and regulations, where it has not yet been done, to ensure compliance with their commitments under the key multilateral non-proliferation treaties***

The United States has undertaken many commitments under a number of international non-proliferation treaties and conventions. In its 2012 report "Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments", the United States Department of State notes that all United States activities during the reporting period remained consistent with the obligations set forth in the Biological and Toxin Weapons Convention (BWC), the Chemical Weapons Convention (CWC), the 1925 Geneva Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, the NPT and various treaties limiting nuclear testing, where the United States has not conducted any nuclear weapon tests or any nuclear explosions for since 1992. Some evidence of United States implementation of specific obligations of these instruments, such as laws and regulations in place, also appears throughout this report and in the matrix.[93] The United States continues to update and strengthen its legal framework to comply with its commitments under various non-proliferation treaties, as noted elsewhere in this report.

## Operative paragraph 8 (c) — cooperation with treaty organizations

***To renew and fulfil their commitment to multilateral cooperation, in particular within the framework of the International Atomic Energy Agency, the Organization for the Prohibition of Chemical Weapons and the Biological and Toxin Weapons Convention, as important means of pursuing and achieving their common objectives in the area of non-proliferation and of promoting international cooperation for peaceful purposes***

The United States works closely with the Organization for the Prohibition of Chemical Weapons (OPCW) as it takes practical steps to fulfil its obligations under the CWC. By early 2013, for example, the United States had destroyed nearly 90 per cent of its Category 1 chemical weapons and continues to make steady progress in preparing two destruction facilities to destroy the last 10 per cent of its stockpile, which remains under full OPCW verification. Overall, the United States has spent more than $25 billion on the destruction of its chemical weapons, and as noted earlier in this report, has spent $1 billion assisting others in destroying their stockpiles. Working through the CWC Conference of States Parties, the United States also helped develop the transparency measures adopted in November 2011, and continues to provide a full and complete declaration of its chemical weapons and associated facilities.

[92] See http://www.un.org/en/sc/1540/.

[93] For a copy of the report, see http://www.state.gov/t/avc/rls/rpt/197085.htm.

In May 2013, the OPCW Director-General, accompanied by a delegation of Executive Council members, visited the United States, where they toured the sites of two chemical weapons destruction facilities under construction and met with United States officials.[94] The delegation consisted of OPCW delegates from a variety of countries as well as State Party representatives of Libya, Japan, the Russian Federation and South Africa. The delegation visited Blue Grass, Kentucky and Pueblo, Colorado to review the status of chemical weapons destruction facilities being constructed in those locations. The delegates made site visits to see the progress of construction and received detailed briefings on plans to complete destruction of the United States chemical arsenal. The delegation also met with representatives of community-based citizens' groups to hear their concerns on the destruction initiatives. OPCW representatives made similar visits to the United States in October 2011 and May 2012. Since the States Parties met in December 2011, the United States completed its chemical agent destruction activities in Tooele, Utah, the largest United States stockpile site.

The United States also maintains a strong commitment to the IAEA. In 2012, for example, the Bureau of International Security and Nonproliferation in the United States Department of State made voluntary contributions to the IAEA for both nuclear security ($8 million) and nuclear safety ($3.3 million) programmes. Nuclear security activities supported included development of guidance documents, the Incident and Trafficking Database, training, curriculum development and technical visits. Nuclear safety activities supported included the following:

- Capacity-building of member States developing a nuclear safety programme
- Sharing knowledge management of lessons learned from the Fukushima accident
- Coordination and collaboration of regional and global safety networks
- Establishing web-based electronic collection of safety standards
- Supporting the IAEA action plan on nuclear safety implementation

Also in 2012, the NNSA contributed in excess of $4 million to the IAEA to support physical security upgrades at nuclear power plants and to support other activities related to nuclear and radiological safety and security efforts. In March 2012 the NNSA successfully completed an international workshop on nuclear forensics methodologies held at the Pacific Northwest National Laboratory, conducted in partnership with the IAEA Office of Nuclear Security. The technical workshop brought together 24 participants from 12 countries and featured presentations and hands-on exercises led by internationally recognized nuclear forensics scientists and technical experts. Also in January 2011, the NNSA supported the completion of a five-year effort by the United States and other IAEA Member States to strengthen the international guidelines for the security of nuclear material, specifically the latest revision of the IAEA Nuclear security recommendations on physical protection of nuclear material and nuclear facilities (IAEA Information Circular INFCIRC/225/Revision 5). Many States incorporate these recommendations into their domestic laws and bilateral agreements as a requisite for peaceful nuclear cooperation. The recommendations in INFCIRC/225/

[94] Until 2015, the OPCW will alternate visits between the United States and the Russian Federation, after which the United States will undergo annual visits.

Revision 5 also provide implementing guidance for international legally binding instruments such as the Convention on the Physical Protection of Nuclear Material, as amended, and Security Council resolutions 1540 (2004) and 1887 (2009).[95] To promote international cooperation on physical security of nuclear material and nuclear facilities, the United States Government has a global effort to promote the implementation of INFCIRC/225/Revision 5. This initiative includes:

- Outreach to — and engagement with — IAEA Member States to provide training, workshops, and other related assistance (including training workshops)
- Supporting the development of additional IAEA Nuclear Security Series documents such as implementation guides; and Coordination and cooperation with the IAEA and other strategic partners in support of improved awareness and implementation of international nuclear security recommendations

In addition, the Office of the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs designated $200,000 in July 2013 to support the development of Integrated Nuclear Security Support Plans through the IAEA.

The United States also works closely with the IAEA and numerous IAEA Member States to provide training and assistance on the implementation of international safeguards. The United States Member State Support Program to IAEA Safeguards provides approximately 10 training classes per year to IAEA inspectors and analysts on various aspects of safeguards implementation. The DOE International Safeguards Engagement Program, an important element of the DOE Next Generation Safeguards Initiative (NGSI), provides over 25 training courses, workshops and seminars to foreign partners to strengthen the ability of these partners to implement their safeguards obligations with the IAEA. Another important element of NGSI, the Human Capital Development programme, annually provides several training classes, short courses and university-level coursework to attract, educate and retain a new cadre of specialists interested in working in the field of safeguards, either in the United States or at the IAEA.

In August 2012, DNDO led the development and completion of the DHS-IAEA Practical Arrangements which outlined several critical areas of cooperation:

- Cooperation in the development and implementation of the IAEA Nuclear Security Series
- Collaboration on the testing, characterization and evaluation of Nuclear Security Detection Instruments and promotion of effective development of instrument and information sharing standards
- Participation and providing expertise to the Nuclear Security Support Centres and Academic Research Initiatives

[95] The new revision included guidance for the expedient recovery of missing nuclear material and the mitigation of possible sabotage. It also introduces the concept of a physical protection "regime" and strengthens performance testing, introduces a graded approach to physical protection that takes into account the threat, the relative attractiveness of the material and the potential consequences associated with theft or sabotage, and provides clearer physical protection guidance for States that may be developing peaceful nuclear energy for the first time.

- Cooperation in the development, review, and support of Nuclear Forensics guidelines, best practices and relevant training courses

In 2013, the IAEA finalized the transition of volume 1 of the GICNT Developing a Nuclear Detection Architecture Series, the *Model Guidelines Document for Nuclear Detection Architectures*, for adaptation into the Nuclear Security Series as No. 21: *Nuclear Security Systems and Measures for the Detection of Nuclear and Other Radioactive Material Out of Regulatory Control*. Nuclear Security Series No. 21 has also been expanded to an IAEA Regional Training Course on Nuclear Security Detection Architectures which includes a series of interactive table-top exercises.

The DNDO National Technical Nuclear Forensics Center has also contributed to the development and refinement of an international nuclear forensics lexicon, based on the United States glossary of nuclear forensics terms, which was provided to the IAEA prior to the 2012 Nuclear Security Summit. Additionally, the National Technical Nuclear Forensics Center led the development of two draft IAEA Implementing Guides, "*Nuclear Forensics in Support of Investigations*", a revision to the current "Nuclear Forensics Support" (Nuclear Security Series No. 2), and "*Development of a National Nuclear Forensics Library*", and also collaborated with FBI on development of a third IAEA Implementing Guide, "*Radiological Crime Scene Management*".

The NRC also provides an annual voluntary contribution to the IAEA, on the order of $1 million, to support the Agency's assistance-related activities. This voluntary contribution focuses on IAEA efforts to support adoption and implementation of the Code of Conduct on the Safety and Security of Radioactive Sources. NRC staff also participates in numerous IAEA-sponsored coordination, information exchange and knowledge management fora. The NRC continues to support the IAEA by providing cost-free experts to work in targeted departments to leverage NRC regulatory insights, such as improvements to the Integrated Regulatory Review Service peer review missions. Finally, the NRC provides significant resources to assist the IAEA and member States to implement the IAEA Action Plan on Nuclear Safety, which was developed in June 2011 to address the initial lessons learned from the Fukushima accident.

The United States remains deeply engaged in compliance and assistance activities in support of the Biological and Toxin Weapons Convention (BWC). Pursuant to terms agreed upon under the Convention, the United States continues to file reports of confidence-building measures with the United Nations Office for Disarmament Affairs. In July 2012, the United States filed a report detailing confidence-building measures relating to the exchange of data on research centres and laboratories, information on national biological defence research and development, information on outbreaks of infectious diseases and similar occurrences caused by toxins and declarations of legislation and regulations and vaccine production facilities.

In 2012, the United States also filed a Report on Implementation of article X of the CWC relating to the United States commitment to partnership, the sharing of information, networking and the development of mutually beneficial outcomes under the BWC. The report described the formal assistance programmes of the United States, and noted that the United States has supported, and will continue to support, capacity-building and other forms of assistance for countries seeking it.

The report described the goals under the BWC that the United States pursues through assistance and cooperation efforts, including improving global population health through the prevention, detection and mitigation of disease and advancing educational and collaborative opportunities for global scientists, and lastly by contributing to the advancement of biological sciences for peaceful purposes.

The implementation report listed numerous examples of United States Government agencies involved in biosafety and biosecurity endeavours, including but not limited to the following:

- HHS is involved in multiple international exchange programmes for scientific research involving sub-agencies such as the United States Food and Drug Administration and the NIH
- The State Department engages with biologic scientific programmes such as bilateral science and technology agreements and endowed science and technology funds used to support patents, publication and commercial sales
- United States university research collaborations

For more specific information on the assistance noted in the implementation report, see the section on assistance in this report.

## Operative paragraph 8 (d) — outreach to industry and the public

**To develop appropriate ways to work with and inform industry and the public regarding their obligations under such laws**

In general, any change in United States law, regulations, policies and guidelines go through formal procedures and extended periods of public review as required by law. In addition, most United States departments and agencies have extensive public outreach and industry partnership programmes designed to improve implementation of United States non-proliferation policies. These programmes typically include dedicated web pages for industry and public outreach within agency websites, and the use of bulletins, circulars, letters, information notices, press releases, hot/dedicated phone/fax lines, email notifications, RSS, outreach offices, "frequently asked questions" and other means of communicating with stakeholders traditionally used in most fields.

In its earlier submissions, the United States mentioned some of the specific outreach activities of the Department of Commerce, the FBI Business/Academic alliance, and the DHS Protected Critical Infrastructure Information Program. The information that follows focuses on recent measures in these and other programmes, beyond the typical activities mentioned above. One notable change in the traditional outreach channels, however, stems from the rising use of social media. By June 2013, CBP, ICE, CDC, APHIS, NNSA, NRC and the Department of Commerce, State and Treasury all use four or more kinds of social media to reach their stakeholders and the general public, most commonly Facebook, Flicker, Twitter and YouTube, but several also employ blogs, chat, Google+, LinkedIn and Pinterest as United States Government agencies adapt their outreach efforts to take advantage of new channels of communication and interaction.

*Department of Agriculture, Animal and Plant Health Inspection Service*

APHIS consults regularly with external groups about the effectiveness of its programmes and the need for improvement. Under its current strategic plan, APHIS seeks to become more inclusive not only to implement its programmes more effectively, but to garner greater stakeholder support for the programmes through a better understanding of how stakeholders will react. Moreover, APHIS has begun to look for proactive ways to incorporate traditional as well as non-traditional stakeholder engagement in its everyday operations to include United States State entities, industry producer groups, academia, industry the public and consumer interest groups, disadvantaged farmers and ranchers, tribal nations, other Federal agencies and other interested citizens.

As an effective practice, APHIS seeks to have more interaction in its outreach activities, rather than APHIS simply providing information to its audience. As a result, APHIS has adopted a multidimensional "Stakeholder Engagement Spectrum" framework to guide its efforts in seeking input from stakeholders. This framework combines traditional outreach (one-direction information sharing) with information exchange (two-way sharing of information and opinions), recommendations (advice or suggestions), agreements (developing mutually acceptable solutions) and stakeholder action (empowering stakeholders to take effective measures). In a notable expression of this approach, the APHIS website allows any visitor to browse the site by self-identifying as one of nine different types of audience: general citizens; government partners; interest groups; media; animal health professionals; plant health professionals; students; academic researchers; or APHIS employees. For each audience, the site brings forward different topics and programmes, including different means for information exchange and stakeholder action. Notably, even with a mature public health service, APHIS found itself doing outreach within its own department (i.e., HHS) on Security Council resolution 1540 (2004) and the BWC, and the APHIS website includes resources for such outreach.

*Department of Commerce, Bureau of Industry and Security*

As the United States Government body most closely associated with United States industry writ large, the Commerce Department, primarily through the Bureau of Industry and Security (BIS), maintains an expansive programme for working with industry to implement United States non-proliferation policies. The oldest of these programmes revolves around the export control responsibilities of BIS, where it offers a host of services to enhance industry compliance. In addition to having an electronic system for submitting license applications, for example, BIS offers its System for Tracking Export License Applications, an online system that allows applicants to track the status of their applications. As BIS gained duties related to implementation of the CWC and most recently the IAEA Additional Protocol, it developed programmes to help industry understand and implement the associated requirements. It also supports several outreach efforts of other agencies, such as the Census Bureau's coordinated Automated Export System compliance seminars and the international export control assistance programmes of the State Department.

Technical Advisory Committees (TACs) play a critical and formal role in the formulation of United States export controls.[96] The DOC uses the TACs to obtain

[96] For more information, see http://tac.bis.doc.gov/index.html.

information from expert sources in industry and the Government on the technical parameters applicable to dual-use commodities, software and technology and on the administration of controls. Persons can apply for membership for appointment by the Secretary of Commerce to serve terms of not more than four consecutive years. The membership reflects a commitment to attaining balance and diversity across a range of industry sectors. TAC members usually meet quarterly. The members must obtain secret-level clearances prior to appointment in order to gain access to classified information that TAC members will need to make recommendations. As of 2013, the Department maintains eight TACs: Emerging Technology and Research; Information Systems; Materials; Materials Processing Equipment; President's Export Council Subcommittee on Export Administration; Regulations and Procedures; Sensors and Instrumentation; and Transportation and Related Equipment.

BIS regularly adds to its industry outreach tools in response to changes in the United States legal framework, industry, communications technologies and other variables. In 2013, for example, BIS developed new web-based tools to assist industry with various licensing and compliance procedures associated with Export Control Reform (ECR), such as the CCL Order of Review Decision Tool, the "Specially Designed" Decision Tool, and the Strategic Trade Authorization tool. It also builds off its existing tools to assist industry, such as when it created a webpage with a classification information table where companies can share information on commodity classifications for their products to supplement the BIS commodity classification request process (which handled more than 6,000 such request in fiscal year 2012) or by posting for the public selected (and redacted to protect proprietary or other sensitive information) Advisory Opinions that BIS provided to individual companies.[97] Over the past few years, BIS has added more online training, which has proven to be an effective practice for helping small and medium-sized businesses, a perennial issue for export control authorities worldwide. Among its introductory series of training modules, six mirror the content in the "Complying with United States Export Controls" seminars that BIS currently offers around the United States, reducing the costs industry faces in learning about export controls.

In addition to new tools, BIS expanded the scope of its outreach and education in furtherance of the Export Control Reform Initiative and related regulatory developments. The BIS Office of Exporter Services worked with the President's Export Council Subcommittee on Export Administration and several industry associations to develop a series of webinars, weekly teleconferences and on-location panel sessions at various conferences to educate industry on proposed regulations, as well as continuing its one-on-one counselling sessions, its domestic seminars and the annual BIS Update Conference and Export Control Forum. It also has developed partnerships with new non-governmental organizations, such as the Society for International Affairs, to help defence companies understand their obligations as items moved from the USML to the CCL as part of the Export Control Reform initiative and participation in a number of trade fairs.

BIS has also expanded its outreach to the academic and scientific community in recent years, as the United States increasingly sees that effective export controls must embrace the changing nature of such institutions as potential exporters of controlled items, especially technologies. As a result, BIS conducted around

[97] See http://www.bis.doc.gov/pdf/ccats_table5.pdf.

30 specially-focused outreach activities in fiscal year 2012 alone. This included the first-ever BIS day-long programme on deemed exports for educational and technical institutions. BIS also furthered its engagement with the Association of University Export Control Officers.

BIS implements several programmes that focus on enforcement beyond investigations and involves its enforcement agents in the licensing process. In fiscal year 2012, BIS performed 721 enforcement outreach visits to companies and individuals and 1,335 preventive enforcement contacts with industry. BIS also developed "Project Guardian" to focus its industry outreach on United States manufacturers and exporters of specific commodities, software and technologies that illicit proliferation networks actively seek to acquire to help make these companies more aware of the threats, and improving cooperation in identifying and responding to suspicious inquiries. In fiscal year 2012, BIS conducted 72 Project Guardian outreach contacts. BIS sees preventive enforcement activities as an effective practice, both in improving compliance and as a source for tips and leads regarding potential export control violations.

*Department of Defense, Defense Threat Reduction Agency*

DTRA safeguards the United States and its allies from global WMD threats by integrating, synchronizing and providing expertise, technologies and capabilities. The agency frequently leverages the capabilities and expertise found outside of government to help in its non-proliferation mission. From the private sector, it works closely with many businesses, including small and disadvantaged firms. To that end, DTRA shares considerable information on procurement and other business opportunities, as well as on contracts awarded, including justifications and approvals, as a matter of transparency. It also invests in basic research efforts at universities, non-profit organizations national labs and DoD service labs, and facilitates productive relationships with other scientific organizations.

*Department of Homeland Security, United States Immigration and Customs Enforcement-Homeland Security Investigations*

Through its Project Shield America industry/academic outreach initiative, ICE-HSI conducts domestic outreach to industry and academia to increase awareness and compliance with United States export control laws. Since 2003, ICE-HSI has conducted almost 23,000 visits to private industry and academic/research institutions (1,432 in 2012) forging both formal and informal relationships to detect and respond to illicit procurement activities and foster better compliance.

*Department of Homeland Security, National Protection and Programs Directorate*

The Infrastructure Security Compliance Division (ISCD) of the DHS National Protection and Programs Directorate (NPPD) conducts an extensive programme of outreach and education aimed at chemical facilities that are or may potentially be regulated under CFATS. The programme helps educate facility owners and operators on the risks of the chemicals they possess and appropriate security measures the facilities may use to reduce those risks and meet applicable risk-based performance standards under CFATS. Since April 2007, NPPD and ISCD management and staff have presented at hundreds of security and chemical industry gatherings and regularly updated affected sectors through their Sector Coordinating Councils and

the Government Coordinating Councils — including the chemical, oil and natural gas and food and agriculture sectors.

To promote information sharing, ISCD has developed several communication tools for stakeholder use, including CFATS-Share, a web-based information-sharing portal that provides certain Federal, State and local agencies access to key details on CFATS facility information as needed; a help desk for CFATS-related questions; a CFATS tip-line for anonymous chemical security reporting; and the chemical security website.[98] ISCD continues to work with industry to identify functional requirements for the next generation of its Chemical Security Assessment Tool (CSAT), including through the use of focus groups across the country to receive direct input from the regulated community on recommended updates and requirements.

In addition, during its compliance assistance visits the ISCD offers compliance and technical assistance in the completion of the CSAT registration, Top Screen, Security Vulnerability Assessment or Site Security Plan for the facility. As of 5 March 2013, ISCD has conducted more than 1,080 compliance assistance visits. Similarly, the Chemical Security Inspectors of NPPD, as well as conducting inspections and supporting compliance assistance visits at regulated facilities, actively work with facilities, local stakeholders and government agencies across the country. Collectively, they have participated in more than 5,000 meetings with Federal, State and local officials and held more than 4,600 introductory meetings with owners and operators of CFATS-regulated or potentially regulated facilities. Perhaps most important, through the CFATS process, the United States has encouraged many facilities to voluntarily eliminate, reduce or modify their holdings of certain chemicals of interest, resulting in their becoming no longer considered high-risk under CFATS.

As mentioned earlier in this report, CBP sees working with the private sector in its Customs-Trade Partnership Against Terrorism (C-TPAT) as an effective tool in managing border security risks. The number of participants has continued to grow in recent years, with the number of certified partners reaching 10,554 by June 2013. Through C-TPAT, and in cooperation with the United States Coast Guard, the Food and Drug Administration, USDA and the TSA, CBP provides information to its partners on a range of topics using several mechanisms, including its C-TPAT Security Link Portal, conferences and bulletins, such as its April 2013 *Guidance on Reporting Suspicious Activities, Anomalies, and Security Breaches* and its June 2013 document on *Suspension, Removals, Appeals and Reinstatement Process*. C-TPAT officials believe that its outreach efforts contribute to low rates of suspended (3 per cent) and removed (1 per cent) partnership validations. DHS works with leaders from global shipping companies and the International Air Transport Association on developing preventative measures, including terrorism awareness training for employees and vetting personnel with access to cargo.

*Department of Health and Human Services, Centers for Disease Control and Prevention and National Institutes of Health*

The CDC Office of Safety, Health, and Environment serves as the WHO Centre for Applied Biosafety Programs and Training. It has produced online training

[98] See www.dhs.gov/chemicalsecurity.

on laboratory biosecurity and offers other downloadable materials that can be used by labs nationally and worldwide.[99] Using learned best practices, in one example of inter-agency cooperation, the CDC and APHIS created user-friendly, online guidance in a "frequently asked questions" format with step-by-step instructions on how to correctly adhere to the documentation requirements for the Select Agents programme, with links to the relevant offices and personnel in the Departments of Commerce, Justice and Transportation. The NIH work together through the Science, Safety, and Security programme, which consolidates resources on biosafety, biosecurity, biocontainment and biorisk management. Through a website and travelling display, the programme promotes transparency and broader awareness about the evolving nature of hazardous biological agents and how to handle and use these agents safely and securely.[100]

The National Science Advisory Board on Biosecurity (NSABB) is a Federal advisory committee that provides advice, guidance and leadership regarding biosecurity oversight of dual-use research, defined as biological research with legitimate scientific purpose that may be misused to pose a biologic threat to public health, national security or both. The NSABB has up to 25 voting members with a broad range of expertise, including molecular biology, microbiology, infectious diseases, biosafety, public health, veterinary medicine, plant health, national security, biodefence, law enforcement, scientific publishing and related fields. It also includes non-voting ex officio members from 15 Federal agencies and departments involved in biosecurity issues.

As a result of these collaborative efforts, as noted earlier in this report, the United States has adopted the Policy for Oversight of Life Sciences Dual Use Research of Concern. The NSABB produced several important guidance documents regarding effective practices for the life sciences community. These include:

- HHS "Screening Framework Guidance for Providers of Synthetic Double-Stranded DNA", voluntary guidance that, recognizing the efforts taken proactively by industry to address the potential biosecurity risks, establishes a screening framework for use by providers of synthetic nucleic acids to minimize the risk that unauthorized individuals will gain access to sequences and organisms of concern through the use of nucleic acid synthesis technology
- NSABB "Guidance for Enhancing Personnel Reliability and Strengthening the Culture of Responsibility" of September 2011, which covers several good management practices, as well as practices that the NSABB does not recommend for widespread implementation, particularly by academic institutions[101]
- NSABB "Strategies To Educate Amateur Biologists and Scientists in Non-life Science Disciplines About Dual Use Research in the Life Sciences" of June 2011, which recommends strategies for promoting awareness of the dual use issue among two non-traditional audiences, namely scientists trained in

[99] See http://www.cdc.gov/biosafety/.
[100] See http://www.phe.gov/s3.
[101] See http://oba.od.nih.gov/biosecurity/pdf/CRWG_Report_final.pdf.

non-life science fields who collaborate in the life sciences on such dual-use research and synthetic biology, and amateur biologists[102]

*Department of Justice, Federal Bureau of Investigation*

The FBI Biosecurity Engagement Program helps build a culture of responsibility and trust between the scientific and security communities. Greater trust allows both communities to pool resources and expertise effectively and mitigate potential and perceived obstacles to improving the cooperation among the disciplines.

Partnering with the American Academy for the Advancement of Science, various universities and other groups, the FBI conducted 24 academic biosecurity outreach events at research institutions across the United States under this programme. It also sponsored two national-level outreach events, the first focusing on mitigating the potential for misuse of life sciences research (i.e., dual-use research) and the second on developing strategies to improve biosecurity as research continues to take on a global character. The FBI also co-sponsored a meeting to determine the feasibility of harmonizing commercial DNA orders between United States and European consortia, allowing for coordination and collaboration to prevent potential misuse of genetic material. During 2012, the FBI also conducted one biosecurity outreach event with persons conducting biological research outside of an institutional setting (i.e., "do-it-yourself" biology) in response to the rapid growth of amateur biology communities over the past decade. The FBI has developed partnerships with amateur biology communities in order to garner their assistance in preventing, detecting and responding to incidents of possible misuse.

This programme also employs some of the more unusual tools to reach out to its stakeholders. The FBI, for example, issued a series of Biosecurity Outreach Cards, similar to sports or cartoon trading cards, to help educate the public on biosecurity matters. Since 2009, the FBI also has been a gold-tier sponsor of the International Genetically Engineered Machine Competition, the world's largest synthetic biology competition, which has resulted in several projects in the competition including biosecurity elements.

*Department of State, Directorate for Defense Trade Controls*

DDTC, part of the DOS Bureau of Political Military Affairs, is responsible for administering the United States defence trade export licensing system and has developed a number of tools to help industry comply with the Arms Export Control Act, as amended, and the International Trafficking in Arms Regulations. DDTC provides speakers and hosts in-house seminars on trade controls. DDTC also uses a variety of electronic systems to make compliance easier for industry and more efficiently and effectively handled by government. Its fully electronic DTrade system enables registered industry users the ability to submit defence export applications and amendments through a secure web interface. DDTC also allows industry to download, fill out and submit DDTC-created Adobe PDF forms and supporting documents through its secure electronic form submission web interface.

[102] See http://oba.od.nih.gov/biosecurity/pdf/FinalNSABBReport-AmateurBiologist-NonlifeScientists_June-2011.pdf.

Finally, it uses "Mary", a web-based document status retrieval system, to allow industry to follow the status of DTrade and Commodity Jurisdiction submissions.

DDTC works closely with the Society for International Affairs (SIA), the primary United States defence trade association, by providing speakers for their conferences and workshops. As all United States producers, handlers and brokers of defence articles must register with DDTC, it has a well-defined audience for its targeted outreach with SIA. It also recognizes the effectiveness of industry compliance programmes. To that end, DDTC has issued its Compliance Program Guidelines to point industry towards key compliance programme elements.[103]

The Defense Trade Advisory Group (DTAG) provides a formal channel for regular consultation and coordination with United States private sector defence exporters and defence trade specialists on issues involving United States laws, policies and regulations for munitions exports. The DTAG advises DDTC on its support for and regulation of defence trade to help ensure that impediments to legitimate exports are reduced while the foreign policy and national security interests of the United States continue to be protected and advanced. The Bureau of Political Military Affairs Assistant Secretary appoints members on the basis of individual substantive and technical expertise and qualifications, drawn from a representative cross-section of United States defence industry, association, academic and foundation personnel, including appropriate technical and military experts. DTAG typically meets about twice a year, covering several topics of emerging relevance to implementing effective export controls. In May 2013, these topics included technical data harmonization, fundamental research and cloud computing.

*Nuclear Regulatory Commission*

The NRC has a long-standing practice of transparency in regulation, licensing and oversight for its interactions with the nuclear industry and the public. In addition to the public nature of its regulations and guidance for its industry and other licensees, it relies on letters, orders, bulletins, circulars and information notices for most direct communications. Regarding outreach to the public, the NRC regularly seeks public input into its decision-making process, as described in "Public Involvement in the Regulatory Process".[104] The opportunities for input include public meetings on security measures.[105] In recent years, the NRC has made a special effort to conduct both domestic and international outreach on its initiative to develop risk-informed security requirements by considering the attractiveness of different forms of nuclear materials to potential malevolent actors.

Security programmes, issues and experiences are an important topic of the annual Regulatory Information Conferences of the NRC, which are attended by hundreds of stakeholders including industry representatives, government workers and members of the public. Additionally, as part of the United States commitment at the 2012 Nuclear Security Summit in the Republic of Korea, in December 2012, the NRC hosted the first-ever International Regulatory Conference on Nuclear Security. The conference served to enhance awareness of the importance of comprehensive national regulatory security programmes, and to build relationships with counterpart regulatory entities with responsibility for nuclear and radioactive materials security.

[103] See http://www.pmddtc.state.gov/compliance/documents/compliance_programs.pdf.

[104] See NUREG/BR-0215.

[105] See 10 CFR Part 73, et seq.

*Department of Energy, National Nuclear Security Administration*

In addition to typical outreach programmes to industry and the public, NNSA has begun several innovative approaches to reduce the risks and vulnerabilities addressed by Security Council resolution 1540 (2004). On a technical level, NNSA established, for example, partnerships with United States commercial entities to accelerate the development of non-HEU-based technical pathways to produce Mo-99, through cost-shared support and by providing the technical support of the United States National Laboratories. On a broader level, in May 2013 the NNSA Global Threat Reduction Initiative (GTRI), in conjunction with the Massachusetts Institute of Technology, Pennsylvania State University and Texas A&M University, produced the first graduates of their new graduate-level nuclear security programme that began in 2011. The programme allows students to earn a nuclear security specialization for a Master of Science degree in a nuclear engineering programme or receive a stand-alone graduate certificate in nuclear security. GTRI and the three participating institutions designed and developed specialized nuclear security curricula, course material and laboratory activities for the programme.

*Department of Treasury, Financial Crimes Enforcement Network and Office of Foreign Asset Controls*

Treasury has several programmes of relevance to industry outreach on non-proliferation. FinCEN, for example, put in place a Financial Institutions Outreach Initiative in its role as administrator of the Bank Secrecy Act to connect with the various industries that face reporting and other requirements under the Act. FinCen publishes a number of reports for industry, such as its *Suspicious Activity Report Activity Review*, as well as conducts webinars and other outreach efforts. In addition to typical outreach activities, OFAC offers industry and the public its Sanctions Program and Country Summaries on each specific embargo or sanctions programme, "risk matrices" for financial and securities institutions on the risks associated with different types of activities and OFAC regulations, and links to recent articles on OFAC compliance in professional journals. In April 2013, OFAC also revealed its plans for an online licensing process, with guidance for applicants. Elsewhere, the Federal Financial Institutions Examination Council (FFIEC) maintains the FFIEC Bank Secrecy Act/Anti-Money Laundering InfoBase to give financial examiners in regulatory agencies the tools and training they need for their compliance activities, which includes requirements on non-proliferation financing and related targeted sanctions.

## Operative paragraph 9 — cooperative dialogue

**Calls upon all States to promote dialogue and cooperation on non-proliferation so as to address the threat posed by proliferation of nuclear, chemical, or biological weapons, and their means of delivery**

The United States promotes dialogue and cooperation on non-proliferation matters in a wide range of venues. The United States, for example, participates in the Asian Senior Level Talks on Nonproliferation, which bring together the 10 ASEAN nations (Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam) with the Republic of Korea, China, Australia and New Zealand to share views on a variety of non-

proliferation issues. Similarly, the United States participates in an annual trilateral conference with the Russian Federation and the United Kingdom on nuclear security best practices, the most recent held in Vienna during February 2013. The event brings together technical experts and high-level policymakers to help improve understanding of the challenges of securing nuclear material, with each country making presentations on best practices.

DHS also leads the Obama Administration's Global Supply Chain Security Initiative, working with the International Civil Aviation Organization, the World Customs Organization, the International Maritime Organization and the IAEA. For improving cooperation on enforcement matters, the United States also has 51 Mutual Legal Assistance Agreements with 46 States and Customs Mutual Assistance Agreements with at least 67 Customs agencies. For the implementation of resolution 1540 (2004), these agreements help create a framework for the activities of the 75 Immigration and Customs Enforcement (ICE) offices in 48 countries. The ICE attachés within these offices direct operations and serve as the agency's liaisons to their local government and law enforcement counterparts. Their responsibilities include:

- Coordinating investigations with foreign law enforcement counterparts
- Providing training and capacity-building to foreign law enforcement counterparts
- Assisting in removal operations by facilitating ICE efforts to repatriate removable aliens
- Referring requests from host country agencies to ICE domestic investigative offices[106]

DHS has signed or jointly released statements on global supply chain security with the European Union and eight additional international partners to declare mutual commitment towards the protection of critical elements of the supply chain system from terrorist attacks and disruptions, while facilitating and expediting the smooth flow of legitimate international trade. DHS also established joint Port of Entry Committees at the 20 largest land border ports of entry and, in 2012, established similar committees at the eight Canadian airports at which Customs and Border Protection (CBP) conducts preclearance.

Under the Customs-Trade Partnership Against Terrorism (C-TPAT), CBP also has signed mutual recognition arrangements with seven jurisdictions — New Zealand, Canada, Jordan, Japan, the Republic of Korea, the European Union and Taiwan. The arrangements allow for the exchange of information, intelligence and documents that will ultimately assist countries in the prevention and investigation of customs offences. The arrangements have particular value for the cooperative work by United States Customs Attaché offices, as each agreement matches the capacities and national policy of the partnering customs administration.

Since its report to the Committee, the United States has continued support of Committee efforts to engage regional and subregional organizations on Security Council resolution 1540 (2004), which the United States believes can make important contributions to foster full implementation of the resolution. Examples of

[106] See http://www.ice.gov/counter-proliferation-investigations and http://www.ice.gov/about/offices/homeland-security-investigations/oia/index.htm.

United States engagement on resolution 1540 (2004) regional implementation matters are illustrated by the following:

*African Union*: During the past two years the United States has worked with the African Union in order to advance implementation of resolution 1540 (2004) on the continent. The United States, singularly and in concert with G8 partners and others, has issued demarches to the African Union and individual African countries in an effort to encourage implementation activity and to have all nations file the initial report on the implementation of resolution 1540 (2004). The United States has begun work with the African Union on plans to hold an African Union-sponsored conference on resolution 1540 (2004) in Addis Ababa, now scheduled for November 2013. The conference plans to focus on a review of the obligations required by the resolution, legislative requirements and border security issues on the African continent.

*ASEAN Regional Forum*: In Asia, the ASEAN Regional Forum has consistently engaged on issues of non-proliferation, disarmament, terrorism and international/regional peace and security since its inception in 1994. The United States has been an active participant at each meeting of the Forum's intersessional meetings on non-proliferation and disarmament, including meetings in 2010, 2011, 2012 and, most recently, in June 2013. At these meetings the United States delegation has engaged participants on a number of topics related to the implementation of resolution 1540 (2004), including but not limited to domestic applications of nuclear technology, confidence-building measures, cooperation and collaboration with regional and subregional organizations and nuclear security. Since the last United States report to the Committee, some examples of United States participation in the Forum related to implementation of resolution 1540 (2004) include:

- First intersessional meeting on non-proliferation and disarmament, organized by the Governments of China, Singapore and the United States, July 2009, Beijing
- The United States hosted the Forum's third intersessional meeting on non-proliferation and disarmament in Las Vegas, Nevada, in February 2011
- ASEAN Regional Forum confidence-building measure seminar on implementation of resolution 1540 (2004), hosted by the Government of Thailand in cooperation with the United States through its EXBS programme, 14 and 15 May 2013, Bangkok
- Fourth intersessional meeting on non-proliferation and disarmament, organized by the Government of Australia, 8 and 9 March 2012, Sydney, Australia
- The second Forum workshop on non-proliferation nuclear forensics, co-chaired by NNSA, the European Commission's Joint Research Center-Institute for Transuranium Elements and Thailand's Office of Atoms for Peace, which brought together Forum member States to promote regional nuclear forensics capacity-building, held in Bangkok from 10 to 12 September 2013.

*Organization for Security and Cooperation in Europe*: In 2007 OSCE issued a statement supporting the United Nations Global Counter-Terrorism Strategy, which takes into account further efforts to implement Security Council resolution 1540 (2004). Achieving full implementation of resolution 1540 (2004) in Europe and Central Asia is a high priority for the United States. With a substantial portion of

funding provided by the United States, beginning in 2009 the OSCE contracted the services of a resolution 1540 (2004) project adviser. The project adviser completed numerous projects relating to implementation of the resolution and provided invaluable assistance to individual OSCE members attempting to implement the resolution. A sampling of projects completed included:

- Developing the OSCE Principles Governing Non-proliferation (1994), which promote the need for compliance with obligations also found under resolution 1540 (2004) and the importance of effective export controls
- Completion of a ministerial declaration on non-proliferation that reiterates the OSCE commitment to promote full and effective implementation of resolution 1540 (2004)
- Establishment of a directory of national and OSCE points of contact for resolution 1540 (2004)
- The development of a best practice guide on export controls and transshipment
- Development of the OSCE/Economic Commission for Europe handbook of best practices at border crossings

In 2012, when continuation of the services of the resolution 1540 (2004) project adviser became problematic due to funding issues, the United States made demarches to several OSCE member States to encourage them to support the continuation of regional implementation activities — such as the development of best practices on border security and strategic trade management — by making an extrabudgetary contribution to the OSCE to continue the services of the resolution 1540 (2004) project team. In part through United States efforts, the Government of Switzerland recently pledged additional funding to enable continuation of this work within the OSCE community.

*Organization of American States*: In the western hemisphere, the United States works closely with the OAS on resolution 1540 (2004) implementation, appearing regularly at OAS meetings and conferences to highlight the importance of the resolution and to promote full implementation of its provisions. The United States has consistently supported OAS resolutions addressing security and non-proliferation, including those that directly address implementation of the resolution. The United States also supports the efforts of the OAS Secretary-General to inform, educate and raise awareness of the resolution and remains deeply engaged with the OAS Assistant Secretary-General's office and CICTE to develop a proposal for the establishment of an office of resolution 1540 (2004) regional coordination for the OAS and for the development of national implementation work plans, such as recently announced by Mexico.

*Caribbean Community*: CARICOM has benefited from the services of a resolution 1540 (2004)regional coordinator during the past three years. It completed a gap analysis of strategic trade control systems in 2011, which has resulted in plans for a model legal framework to address strategic trade controls in several countries and enhance other laws that meet the requirements of the resolution. In these endeavours, the assistance of the regional coordinator, fully funded by the United States, has proven instrumental, with CARICOM members having conducted numerous training and awareness-raising activities and developing a list of points of contact. With United States assistance, CARICOM members have received training

and equipment assistance from the United States, and several additional implementation programmes for the region exist in the delivery, development or planning stages.

*Other regional engagement*: The United States has engaged with other regional and subregional organizations on resolution 1540 (2004), including the Central American Integration System, the Pacific Islands Forum, the Gulf Cooperation Council, the Andean Community and others. The United States intends to remain closely engaged with regional and subregional organizations engaged in implementation of the resolution.

## Operative paragraph 10 — cooperative action

**Further to counter that threat, calls upon all States, in accordance with their national legal authorities and legislation and consistent with international law, to take cooperative action to prevent illicit trafficking in nuclear, chemical or biological weapon, their means of delivery, and related materials**

The United States cooperates with other nations to interdict illicit transfers of WMD. As an example, on 16 July 2013, Panamanian authorities interdicted a shipment of illicit arms and related material aboard the Motor Vessel (M/V) Chong Chon Gang of the People's Democratic Republic of Korea that originated in Cuba bound for the People's Democratic Republic of Korea. The Government of Panama requested United States assistance in this matter, and the United States responded. The United States also supports this form of cooperation through several other mechanisms. Some examples appear below.

*The Global Initiative to Combat Nuclear Terrorism*

The GICNT is a multinational initiative aimed at strengthening international cooperation and collaboration in combating nuclear terrorism. Co-chaired by the United States and the Russian Federation, the GICNT is a voluntary partnership of 85 nations and four official observers (IAEA, the European Union, UNODC and Interpol) with a mission to strengthen the global capacity to prevent, detect and respond to the shared threat of nuclear terrorism. All partners have endorsed the GICNT Statement of Principles, a set of core nuclear security principles that encourage a sense of international cooperation and commitment across a broad spectrum of deterrence, prevention, and response objectives.

The GICNT carries out its mission by conducting multilateral activities that strengthen the plans, policies, procedures and interoperability of partner nations. To date, the GICNT has conducted more than 60 of these activities. The Implementation and Assessment Group (IAG), led by the IAG Coordinator (Republic of Korea, 2013-2015), coordinates all GICNT activities in close consultation with the Co-Chairs.

GICNT partners are currently focused on capacity-building in three core technical areas through a series of working groups: nuclear detection, nuclear forensics and response and mitigation. At the May 2013 GICNT Plenary Meeting, partners endorsed a new strategic focus that includes increasing practical, topically- and regionally-focused activities, and strengthening cooperation with the four GICNT official observers and other international organizations. The Co-Chairs,

along with the IAG Coordinator, are leading the strategic planning and efforts to move the GICNT in this direction.

*The Proliferation Security Initiative*

As a founding endorser of the PSI, the United States has hosted or attended dozens of PSI capacity-building activities and continues to play a leadership role in the Initiative through its participation in the Operational Experts Group, which consists of 21 PSI States with significant interdiction-related expertise, capabilities and resources. The United States seeks to strengthen and expand the PSI, ensuring that it remains an effective tool to stop WMD proliferation and, in the words of President Obama, "to sustain it as a core element of the international non-proliferation regime". The United States actively contributes to these goals by leveraging related counterproliferation efforts across the United States Government, by contributing military, customs, law enforcement and other security experts and assets to interdiction exercises, by hosting PSI meetings, workshops and exercises with other PSI-endorsing States and by working with partner States to improve their capacity to prevent or stop the proliferation of WMD.

As of the tenth anniversary of the PSI in May 2013, 102 States had endorsed the Statement of Interdiction Principles and now participate in the PSI, including by hosting or attendance at PSI capacity-building activities such as exercises, meetings and workshops. PSI States use such events to enhance their individual and collective capabilities to take appropriate and timely actions to meet the fast-moving situations involving proliferation threats. On 28 May 2013 the United States, Poland, and 70 other PSI partner States, as well as three international organizations, marked the tenth anniversary of the PSI with a high-level political meeting in Warsaw. The Acting Undersecretary of State for Arms Control and International Security led the United States delegation to the event, at which PSI partner States recognized the critical role the Initiative has played in countering the spread of WMD.

*Ship boarding agreements*

Tangible examples of non-proliferation cooperation, these agreements provide authority on a bilateral basis to board vessels suspected of carrying illicit shipments of weapons of mass destruction, their delivery systems or related materials. These agreements will facilitate bilateral cooperation to prevent such shipments by establishing procedures to board and search such vessels in international waters. Under the agreements, if a vessel registered in the United States or the partner country is suspected of carrying proliferation-related cargo, either one of the parties to this agreement can request of the other to confirm the nationality of the ship in question and, if needed, authorize the boarding, search and possible detention of the vessel and its cargo. These agreements are important steps in further operationalizing the PSI and strengthening the mechanisms that we have at our disposal to interdict suspect weapons of mass destruction-related cargoes. They are modelled after similar arrangements that exist in the counter-narcotics arena. Through the PSI, the United States has ship boarding agreements with Antigua and Barbuda, the Bahamas, Belize, Croatia, Cyprus, Liberia, Malta, the Marshall Islands, Mongolia, Panama and St. Vincent and the Grenadines.